



# **A Study of the Relative Work Content of Evaluation and Management Codes**

*Prepared for:*

**Industrial Medical Council**

**California Department of Industrial Relations**

*Prepared by:*

**The Lewin Group**

*April 29, 2003*

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**Industrial Medical Council  
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*April 29, 2003*

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## EXECUTIVE SUMMARY

### A. Introduction

The Workers' Compensation Official Medical Fee Schedule (OMFS) is used by the State of California to determine reimbursement rates for medical services provided to workers' compensation patients. The OMFS establishes maximum fees for medical services provided by physician and non-physician health care providers to individuals receiving workers' compensation benefits. The Industrial Medical Council of the California Department of Industrial Relations (IMC/DIR) recently proposed the adoption of a resource-based relative value scale (RBRVS) for the OMFS.

### B. Purpose of Study

There is a commonly-held belief among physicians and researchers that E&M services are the types of services for which the physician work required to treat injured workers is most likely to differ from the work required to treat patients in other payer settings. Many reasons have been suggested in support of the contention that the physician work involved with the provision of E&M services to insured workers is different than for other patients. Physicians treating injured workers may be responsible for determining work restrictions, evaluating psychosocial issues that are unique to individuals receiving workers' compensation, reviewing job analyses, and educating workers and employers about early return to work. The fact that these services take place within a complex legal framework is also important. These activities may be **complements** to or **substitutes** for work performed by physicians during the provision of E&M services outside of the workers' compensation setting.

The study utilizes an approach similar to that of the American Medical Association (AMA) Resource-Based Relative Value Scale Update Committee (RUC) in determining physician work values. The purpose of The Relative Work Content of E&M Codes study (hereafter referred to as the Physician Work study) is fourfold: (1) to determine whether the physician work required to provide E&M services to injured workers in California is less than, greater than, or comparable to the physician work required to provide the same services to other types of patients, (2) to interpret the consistency and magnitude of the study results across the universe of E&M codes in the OMFS, (3) to identify factors that may contribute to any differences between the physician work in providing services to injured workers and the work in providing the same services to other types of patients, and (4) to determine the budgetary implications to the State of any physician work differentials identified.

### C. Methods

Both qualitative and quantitative methods were used to discern the extent to which additional skill, time, and judgment might be needed to provide E&M services to injured workers. We developed the revised workers' compensation RVUs in the following seven steps, each of which is listed below. A guiding principle throughout the study was to be as inclusive as possible. To achieve this objective, we made every effort to include in all study activities as many workers' compensation physicians as possible across all the various specialties that provide services to injured workers. A second guiding principle was to follow the AMA RUC process as closely as

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possible. A third guiding principle was to request and incorporate input from a wide range of stakeholders throughout the study process. The AMA RUC process of determining physician work values has been utilized by numerous specialty groups and has shown to produce creditable results.

The project was comprised of the following seven steps:

### **Step 1: Developed Preliminary Draft of Physician Work Survey Instrument**

The Lewin Group conducted a focused review of the literature concerning measurement of the value of physician work and then modified the RUC physician work survey instrument so that it was relevant and appropriate to workers' compensation. We developed a draft survey instrument to serve as a starting point for the final physician work survey instrument.

### **Step 2: Convened Technical Advisory Panel**

We convened a panel of physician experts broadly representative of the specialties treating injured workers to serve as a Technical Advisory Panel (TAP). The TAP guided the study process by selecting a sample of 20 codes to include in the physician work survey instrument, assisting the project team in selecting and/or developing reference codes (i.e., comparison codes), developing clinical vignettes (i.e., brief patient descriptions) for each surveyed code and reviewing and commenting on the draft physician work survey instrument.

### **Step 3: Refined Physician Work Survey Instrument**

There were three basic tasks for each respondent to do to complete the physician work survey instrument. In the first task, the physician was asked to separately value the four components of physician work. In the second task, the physician was to put the components together, weight them subjectively, and assign a single work RVU. In the third task, the physician was asked to make a final determination whether the initial estimate accurately reflected the components of physician work, using his or her best judgment of the work relative to a known reference service. The final survey estimate (hereafter referred to as the surveyed physician work RVU) thus reflects two mental operations: 1) a "sum of the parts" estimation, and 2) an estimation based upon how close the code was positioned to a related service.

After receiving final input from the TAP, we refined the physician work survey instrument. First, we added an additional area on the vignette section of the survey in which respondents were asked to choose the vignette that best reflects their typical patient. We also added an area at the end of the patient vignettes section which offered the participant the option of saying that, although they bill the code, none of the vignettes are reflective of a typical patient for their practice. Second, after the respondent formulates an initial estimate of the physician work RVU, we added a "scaling thermometer" which graphically presented the physician work RVUs for other codes contained in the same family as the surveyed code. Two key instructions were added to the survey instrument and are presented below.

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### *Instruction #1: Note that Claim has been Accepted*

The TAP assisted with crafting and refining the wording within the Instructions section of the survey instrument. The text for Instruction #1 read as follows:

**“When you evaluate the work required in providing services to an injured worker, you should assume that the claim has been accepted by the employer/insurance company. For all reference services, you should assume that the service is not for a workers’ compensation patient. Services billed under the Medical-Legal Fee Schedule are not included in the survey.”**

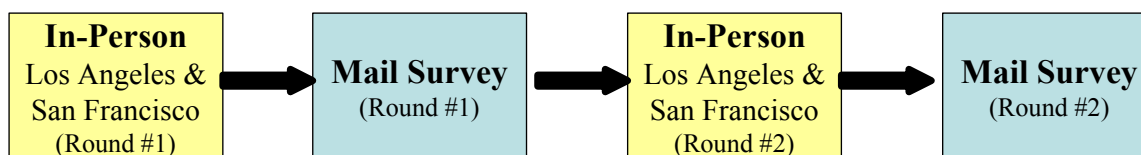
### *Instruction #2: Separately Reimbursable Services*

It was also important to highlight to survey respondents that they were to include only the physician work activities pertaining to the code to be surveyed and not to include physician work activities associated with special reports and services that are an adjunct to the basic services rendered, and are separately reimbursable. For that reason, the survey instrument included a section presenting the services and codes that were not to be included in their responses.

In contrast, physician work associated with reports that are not separately reimbursable but must be completed when providing E&M services **should** have been included in respondents’ physician work estimates.

## **Step 4: Administered Physician Work Survey Instrument**

We used a multiple-mode data collection strategy, which included two rounds of in-person survey sessions in Los Angeles and San Francisco, as well as two rounds of administration by-mail with telephone follow-up.



In-person survey sessions were conducted in order to assure a threshold number of responses to the survey. We conducted two sets of half-day in-person survey sessions: one in Los Angeles, and one in San Francisco. One advantage of the in-person sessions was that project staff were available to answer questions. We also administered the survey by-mail to a random sample of physicians treating workers’ compensation patients in California. The sample was pulled from three sources:<sup>1</sup> (1) a list of Qualified Medical Examiners, (2) a list of active providers who had billed various workers’ compensation insurance carriers, and (3) a list of physicians in the current State of California Insurance Fund (SCIF) Preferred Provider Network. The survey was initially sent to 2,300 workers’ compensation providers in the spring of 2002. A toll free hotline was established so that respondents could contact The Lewin Group if they had any questions

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<sup>1</sup> The three sources contained information on physicians current as of 2002.

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regarding the survey. The survey was subsequently re-sent to a random sample of 500 of the original 2,300 physicians in order to increase both the response rate and representation across specialties.

### **Step 5: Data Analysis**

We focused our analyses on respondents' final surveyed physician work RVU estimates. We began each analysis by plotting individual surveyed physician work RVU estimates for each of the twenty surveyed codes. Next we calculated medians for each code.<sup>2</sup> Then we compared the median surveyed physician work RVUs to the RBRVS physician work RVUs for each of the twenty surveyed E&M codes by calculating the ratio of surveyed physician work RVUs to RBRVS physician work RVUs. This ratio provided a benchmark of workers' compensation physician work to the physician work involved in treating other types of patients.

### **Step 6: Extrapolation to Non-Surveyed Codes**

The next part of the analysis was to develop a regression approach to predict physician work RVUs for non-surveyed E&M codes based on each individual respondent's surveyed physician work RVU for each surveyed code. As mentioned earlier, we surveyed 20 out of the 113 E&M codes in the OMFS.<sup>3</sup> Because the RUC uses the median of surveyed codes to establish physician work RVUs, we performed a median regression analysis using each respondent's surveyed physician work RVU estimates to calculate revised physician work RVUs for each code.<sup>4</sup>

### **Step 7: Determined Financial Implications of Increase in Physician Work RVUs**

Last, we estimated the budgetary impact of the revised E&M physician work RVUs on total OMFS E&M payments in a non-budget neutral fashion, using the revised workers' compensation physician work RVUs.

## **D. Results**

We use the physician work RVUs contained in the 2002 Medicare National Fee Schedule Relative Value File as a basis for comparison and refer to those RVUs as RBRVS physician work RVUs. We compare the surveyed physician work RVUs to the RBRVS physician work RVUs. The surveyed physician work RVUs were higher than the RBRVS physician work RVUs in all instances. Furthermore, we found that the percent increase in the revised workers' compensation physician work RVUs relative to RBRVS physician work RVUs tended to decline with increasing complexity of E&M service within families. This suggests that workers' compensation E&M work input or "overhead" is relatively fixed, and declines as a percentage of the base RVU as the base RVU increases.

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<sup>2</sup> The RUC uses the median of surveyed codes to establish physician work RVUs.

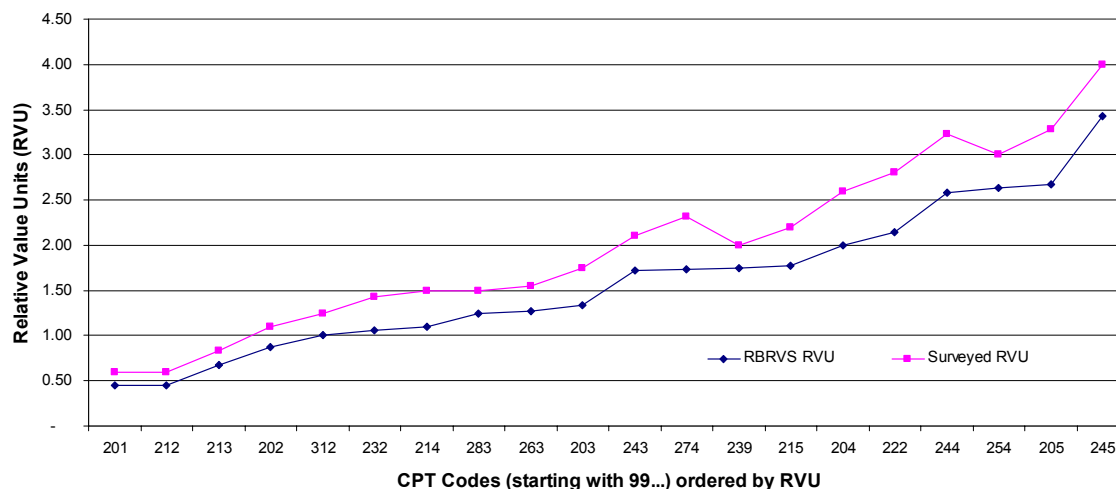
<sup>3</sup> There are 128 E&M codes in the 2002 Medicare Physician Fee Schedule, compared to the 113 in the OMFS. The OMFS is primarily based on the 1997 AMA CPT, and hence there is a discrepancy in the number of E&M codes.

<sup>4</sup> We tested various regression approaches to develop "predicted" physician work RVUs. We then compared the surveyed and predicted physician work RVUs to RBRVS physician work RVUs for each of the 20 surveyed codes. The median regression approach most closely matched median surveyed work values on a code by code basis.

## 1. **Surveyed Physician Work RVUs Compared to RBRVS Physician Work RVUs**

Exhibit ES-1 contains the surveyed physician work RVUs for the 20 sampled E&M codes, as well as the RBRVS physician work RVUs for the codes in order to provide context. For each code, RVUs obtained from the survey respondents are higher than those taken from the RBRVS.

**Exhibit ES-1**  
**Surveyed Physician Work RVUs vs. RBRVS Physician Work RVUs**



## 2. **Overall and Participant Group Mean Ratios of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs**

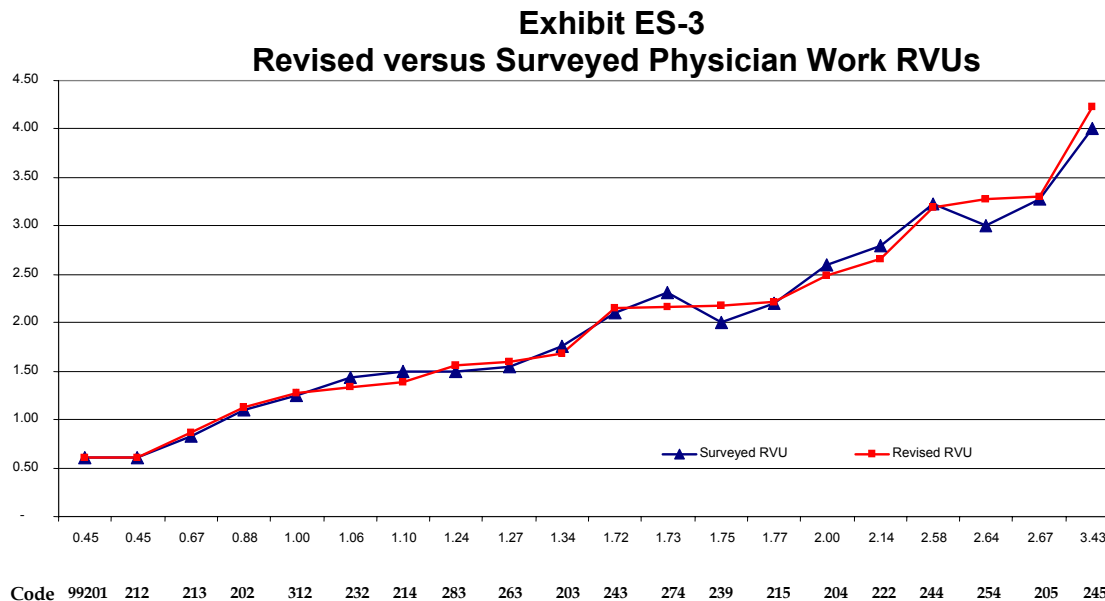
The ratios of the surveyed physician work value to the RBRVS physician work value were comparable across all respondent groups. The overall mean ratio of surveyed physician work RVUs to RBRVS physician work RVUs for the 20 surveyed codes was 1.28. The ratio of 1.28 suggests that physician work for E&M codes for workers' compensation patients was about 28% greater than that for other types of patients. Exhibit ES-2 contains these ratios for each of the three respondent groups and the overall mean ratio.

**Exhibit ES-2**  
**Mean Ratios of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs**

| Participant Group            | Mean Ratio of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs |
|------------------------------|---|
| Los Angeles Survey Session   | 1.32  |
| San Francisco Survey Session | 1.23  |
| Mail Respondents             | 1.27  |
| <i>Overall Mean Ratio</i>    | <i>1.28</i>   |

### 3. Revised versus Surveyed Physician Work RVUs

A median regression equation was estimated to extrapolate from the 20 surveyed codes and predict physician work RVUs for all E&M codes. Exhibit ES-3 presents graphically the revised physician work RVUs and the surveyed physician work RVUs for the 20 surveyed E&M codes. The revised physician work RVUs very closely approximate the surveyed physician work RVUs for all 20 surveyed codes.



In those instances where departures are evident, the regression results turned out to be more consistent one code to the next.

### 4. Revised Physician Work RVUs

The revised physician work RVUs for all E&M codes in the OMFS based on the median regression analysis are presented in Appendix H. Exhibit ES-4 also presents the item response for the 20 E&M codes included in the physician work survey. Item response was greatest for the office/outpatient setting. The revised physician work RVUs for both the surveyed and the non-surveyed codes were derived from the median regression analysis.

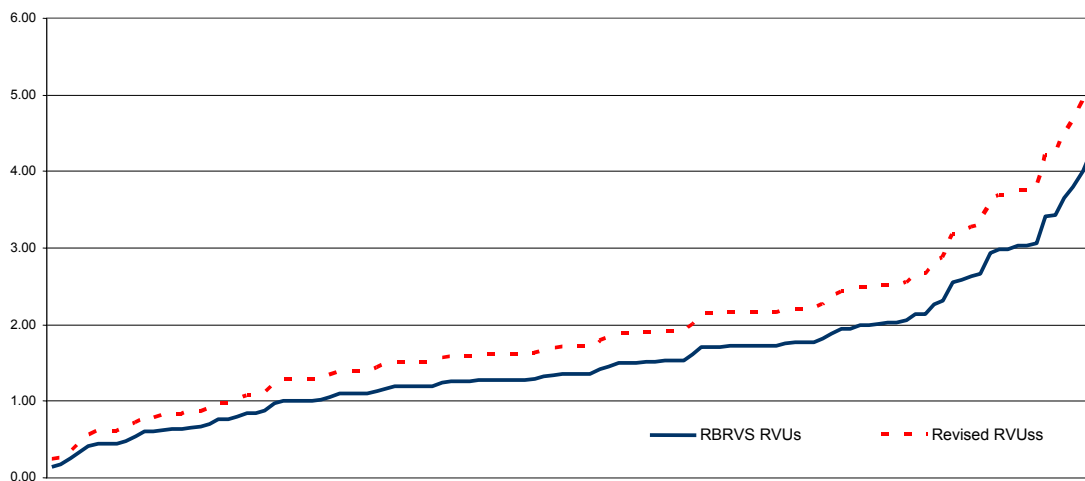
## Exhibit ES-4 Revised Physician Work RVUs

| CPT Codes                                  | Descriptor (Source CPT Manual 2001)   | Survey Item Response (N) | Revised Work RVUs |
|--|---|--------------------------|-------------------|
| OFFICE VISIT - NEW                         |   |                          |                   |
| 99201                                      | Office/outpatient visit, new , presenting problems are self-limited/minor.  | 44                       | 0.60              |
| 99202                                      | Office/outpatient visit, new , presenting problems of low to moderate severity.   | 52                       | 1.12              |
| 99203                                      | Office/outpatient visit, new , presenting problems of moderate severity.  | 67                       | 1.68              |
| 99204                                      | Office/outpatient visit, new , presenting problems of moderate to high severity.  | 75                       | 2.49              |
| 99205                                      | Office/outpatient visit, new , presenting problems of moderate to high severity.  | 66                       | 3.30              |
| OFFICE VISIT - ESTABLISHED                 |   |                          |                   |
| 99212                                      | Office/outpatient visit, established , presenting problems are self-limited/minor.  | 68                       | 0.60              |
| 99213                                      | Office/outpatient visit, established , presenting problems of low to moderate severity.   | 77                       | 0.87              |
| 99214                                      | Office/outpatient visit, established , presenting problems are of moderate to high severity.  | 73                       | 1.39              |
| 99215                                      | Office/outpatient visit, established , presenting problems are of moderate to high severity.  | 69                       | 2.21              |
| INITIAL HOSPITAL CARE PER DAY              |   |                          |                   |
| 99222                                      | Initial hospital care per day , problem(s) requiring admission is of moderate severity.   | 17                       | 2.66              |
| SUBSEQUENT HOSPITAL CARE PER DAY           |   |                          |                   |
| 99232                                      | Subsequent hospital care per day , patient is responding inadequately to therapy or has a minor complication.   | 20                       | 1.34              |
| HOSPITAL DISCHARGE DAY                     |   |                          |                   |
| 99239                                      | Hospital discharge day , > 30 min spent for final hospital discharge of a patient. Includes final examination, discussion, instructions, preparation of records, prescriptions. | 18                       | 2.18              |
| OFFICE CONSULTATION                        |   |                          |                   |
| 99243                                      | Office consultation , new or established patient, presenting problem(s) of moderate severity.   | 50                       | 2.15              |
| 99244                                      | Office consultation , new or established patient, presenting problem(s) of moderate to high severity.   | 63                       | 3.19              |
| 99245                                      | Office consultation , new or established patient, presenting problem(s) of moderate to high severity.   | 55                       | 4.23              |
| INPATIENT CONSULT - INITIAL                |   |                          |                   |
| 99254                                      | Initial inpatient consult , new or established patient, presenting problem(s) of moderate to high severity.   | 21                       | 3.27              |
| INPATIENT CONSULT - FOLLOW-UP              |   |                          |                   |
| 99263                                      | Follow-up inpatient consult , established patient, unstable or developed a severe complication or a significant new problem.  | 15                       | 1.60              |
| CONFIRMATORY CONSULTATION                  |   |                          |                   |
| 99274                                      | Confirmatory consultation , new or established patient, problem(s) of moderate to high severity.  | 27                       | 2.16              |
| EMERGENCY DEPARTMENT VISIT                 |   |                          |                   |
| 99283                                      | Emergency department visit , presenting problem(s) of moderate severity.  | 16                       | 1.56              |
| NURSING FACILITY CARE PER DAY - SUBSEQUENT |   |                          |                   |
| 99312                                      | Nursing facility care per day , subsequent , new or established, patient is responding inadequately to therapy or has developed a minor complication.                           | 9                        | 1.27              |

### 5. Revised versus RBRVS Physician Work RVUs for all E&M Codes

Exhibit ES-5 below presents the revised workers' compensation physician work RVUs compared to the RBRVS physician work RVUs for all the E&M codes. The E&M codes are arranged in order of increasing RBRVS physician work RVUs. The revised workers' compensation physician work RVUs are greater than the RBRVS physician work RVUs across all codes. These results indicate that the median regression approach provided consistent results one code to the next.

### Exhibit ES-5 Revised versus RBRVS Physician Work RVUs



E&M Codes in order of increasing Physician Work RVUs

#### 6. *Percent Increase in Revised RVUs Compared to RBRVS Physician Work RVUs for all E&M Codes*

Exhibit ES-6 below presents the percent increase in the revised physician work RVUs, with the E&M codes arranged in increasing order based on RBRVS physician work RVUs. The percent increase in the revised physician work RVUs relative to RBRVS physician work RVUs tended to decline with increasing complexity of E&M service. The initial high percentages are consistent with the contention that workers' compensation patients are associated with a relatively fixed amount of work overhead irrespective of the underlying value of E&M code physician work.

### Exhibit ES-6 Percent Increase in Revised Physician Work RVUs



E&M Codes in order of increasing Physician Work RVUs

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## 7. Impact of Survey Results

We estimated the payment for all E&M codes using our revised physician work RVUs and compared it to the actual payment for the codes. We then divided by the total actual payment for all codes in order to obtain the impact of the increase in physician work RVUs for E&M services. Results of the Physician Work Study indicate that there would be an increase in total payment of 3.25 percent, relative to baseline payments which are budget neutral with respect to current workers' compensation expenditures.

### Exhibit ES-7 Impact of Survey Results

|          |  |           |                    |
|----------|--|-----------|--------------------|
| <b>A</b> | <b>Payment for all E/M Codes using Revised Physician Work RVU Values</b>         | <b>\$</b> | <b>57,333,609</b>  |
| <b>B</b> | <b>Baseline E/M payment using RBRVS Budget Neutral Payments</b>                  | <b>\$</b> | <b>50,316,739</b>  |
| <b>C</b> | <b>Increase in E/M payment due to Revised E&amp;M Physician Work RVUs</b>        | <b>\$</b> | <b>7,016,870</b>   |
| <b>D</b> | <b>Total Payment (all codes)</b>   | <b>\$</b> | <b>215,577,690</b> |
| <b>E</b> | <b>% Increase from Baseline</b> $[(\text{Row A} - \text{Row B}) / \text{Row D}]$ |           | <b>3.25%</b>       |

## E. Conclusion

This study was designed to determine if physician work for E&M codes is greater than, equal to, or less than that for worker's compensation patients in comparison to care provided to other patients. The study approach is modeled after that used by CMS and AMA in the RUC process. Study results are highly consistent, one code to the next, and are largely consistent across various segments of the survey sample. Finally, we did not detect any appreciable differences in results across the various specialty groups.

Two study results predominate. The first is that physician work for E&M code sources is about 28 percent greater for workers compensation patients. The second is that this percentage increase is relatively stable one E&M code to the next, with a predictable decline as the underlying values in Medicare RBRVS increase within a code family. From a financial perspective, if these increases were paid in a budget neutral fashion, overall workers' compensation expenditures would rise by just over 3 percent, a relatively modest amount given the importance of physician payment equity.

Study results are consistent with the workers compensation community's views that workers compensation reflects both clinical and legal activities which are inextricably related to the employee's return to work. This observation has important ramifications in that attempts to reduce the overall level of workers' compensation expenditures in any meaningful fashion will necessitate a fundamental revision of the legal and behavioral framework in which clinical services are provided to worker's compensation patients.

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## I. INTRODUCTION AND BACKGROUND

The Workers' Compensation Official Medical Fee Schedule (OMFS) establishes reasonable maximum fees for medical services provided by health care practitioners in California. Fee rates in the OMFS are based primarily on historic charges. The IMC/DIR recently proposed to adopt a resource-based relative value scale for the OMFS. Resource-based payment systems, including the Medicare Physician Fee Schedule's (MFS) Resource-Based Relative Value Scale (RBRVS), are based on physician "resource inputs" as opposed to charges, and are therefore intended to improve the appropriateness of relative payments for medical services and hence increase payment accuracy. Many third party payers, including State Medicaid programs and managed care organizations are currently using variations of the Medicare RBRVS to determine the relative value of physician services. In most fee schedules, including the OMFS, each medical service and procedure performed has a code associated with it that serves to identify the service or procedure for payment purposes.

The principle advantage of moving toward an RBRVS is that the resulting fee schedule would be resource based and, therefore, more likely to improve the fairness of physician payments for workers' compensation services.<sup>5</sup> RBRVS rests on the concept that the resources consumed in the provision of a medical service should be used as the basis of payment.<sup>6</sup> A second benefit of adopting an RBRVS is that it has undergone a ten year validation process by researchers and payers. The Center for Medicare & Medicaid Services (CMS) is required by Congress to review and update the relative value units (RVUs) in the MFS not less than every five years. It is important to note that California is proposing to adopt the relative value units (RVUs) in the RBRVS for the OMFS and **not** the Medicare conversion factor which sets overall physician payment levels in the MFS (see below). Used in this fashion, RBRVS is an allocation mechanism, not a budgetary tool.

Services that physicians provide to Medicare beneficiaries are reimbursed based on payment rates set in the OMFS. Each medical service and procedure contained in the MFS is represented by a five-digit current procedural terminology (CPT) code developed by the American Medical Association (AMA). Prior to 1992, physician payments in the MFS were based on a calculation of "customary, prevailing, and reasonable" charges associated with the services. In 1992, however, under the Omnibus Budget Reconciliation Act of 1989, the federal government replaced the charge-based payment system with one based on the relative resources required to provide service to Medicare patients. Payments for services provided by physicians were based on three components: physician work, practice expense and malpractice. Each of these components have separate RVUs associated with them and therefore each medical service or procedure provided has three separate RVUs.<sup>7</sup> Researchers from the Department of Health

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<sup>5</sup> Hsiao WC, Braun P, Yntema D, et al. (1988). Estimating physician work for a resource-based relative value scale. *New England Journal of Medicine*. 319: 881-888.

<sup>6</sup> Bean JR. (2002). Valuing neurosurgery services: Part I. The historical development and interrelationships of Current Procedural Terminology and the Medicare Fee Schedule. *Neurosurgery Focus*, Vol.12. April 2002.

<sup>7</sup> Despite the original intent, only the work RVUs of the original MFS were truly resource based. Until recently, practice expenses and malpractice RVUs were entirely based on charges. The four-year transition to resource-based practice expense RVUs began in 1999. Currently, the practice expense RVUs are a mix of the 1998 charge-

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Policy and Management at Harvard University School of Public Health developed RBRVS over the course of several years while under contract with the Health Care Financing Administration.<sup>8,9</sup>

Physician work represents approximately 55% of total Medicare payment, practice expense represents approximately 42%, and malpractice approximately 3% of total Medicare payments.<sup>10</sup> Total payments for medical services and procedures are determined by multiplying the RVUs associated with each component by the appropriate geographic practice cost index (GPCI).<sup>11</sup> These values are then summed and multiplied by a single conversion factor to determine the Medicare allowed amount.<sup>12</sup>

Components of physician work include: (1) the time it takes for a physician to perform a service, (2) physician technical skill and physical effort, (3) mental effort and judgment, and psychological stress that may occur when an adverse outcome has serious consequences.<sup>13</sup> The time physicians spend with patients (face-to-face time) is important to determining payment level and allocating practice expenses. The Harvard team that developed the initial RBRVS code-specific values found a distinct correlation between the time of a visit and the services that were rendered.<sup>14</sup> Other research has also documented the relation between the amount of physician work and the face-to-face time spent during the visit.<sup>15</sup> Since RBRVS was implemented, however, time has become less important as a determinant of physician work RVUs for a variety of reasons, including technology advances, physician efficiency, and delegation to clinical staff, among others.

## A. Purpose of Study

The RBRVS is the prevailing model used today to describe, quantify, and reimburse physician services. The purpose of The Relative Work Content of E&M Codes study is fourfold: (1) to determine whether the physician work required to provide E&M services to injured workers in California is less than, greater than, or comparable to the physician work required to provide

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based RVUs and the 2002 fully-implemented RVUs. The resource-based malpractice RVUs replaced the charge-based RVUs on January 1, 2000.

<sup>8</sup> Hsiao, W. C., Braun, P., Becker, E. R., et al. (1992). "Results and Impacts of the Resource-Based Relative Value Scale." *Medical Care*; 30(11): NS61 – NS79.

<sup>9</sup> As of July 1, 2001, the Health Care Financing Administration changed its name to the Centers for Medicare and Medicaid Services (CMS).

<sup>10</sup> <http://www.ama-assn.org/ama/pub/category/2292.html>

<sup>11</sup> There are three GPICs for each medical service or procedure performed; one for each of the three RVUs used to determine payments in the MFS. The GPICs are intended to reflect the relative costs of physician work, practice expense and malpractice in a given area compared to a nationwide average for each component. The GPICs are used to adjust payments to reflect geographic variation in the cost of providing medical care due to differences, for example, in office rent or clinical labor costs.

<sup>12</sup> Medicare Allowed Amount = Conversion Factor \* [(RVUWork \* GPCIWork) + (RVUPractice Expense \* GPCIPractice Expense) + (RVUMalpractice \* GPCIMalpractice)]

<sup>13</sup> American Medical Association/Specialty Society RVS Update Committee. Physician Work RVS Update Survey.

<sup>14</sup> Dunn D, Hsiao WC, Ketchan TR, Braun PA. (1988). A method for estimating the pre-service and post-service work of physicians. *JAMA*, 260(16): 2379-2384.

<sup>15</sup> Hsiao WC, Dunn DL, Verrilli DK. (1993). Assessing the implementation of physician-payment reform. *New England Journal Medicine*, 328: 928-933.

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the same services to other types of patients, (2) to interpret the consistency and magnitude of the study results across the universe of E&M codes in the OMFS, (3) to identify factors that may contribute to any differences between the physician work in providing services to injured workers and the work in providing the same services to other types of patients, and (4) to determine the budgetary implications to the State of any physician work differentials identified. A focus of the Physician Work Study was on the appropriateness of the Medicare RVUs for quantifying E&M services in workers' compensation. There is a commonly-held belief among physicians and researchers that E&M services are the types of services for which the physician work required to treat injured workers is most likely to differ from the work required to treat patients in other settings.

## **B. Study Context**

This study of the relative physician work involved in E&M services (or the "Physician Work Study") is part of a larger effort undertaken by the IMC/DIR to revise the OMFS. The IMC/DIR sponsored two additional and related studies, which were conducted by The Lewin Group: the California Workers' Compensation RBRVS Study (RBRVS Study) and the E&M Practice Expense Study. The three studies examined the current structure of E&M codes within the OMFS, and determined the likely impacts and distributive effects of a transition to an RBRVS-based payment system.

In the RBRVS Study, The Lewin Group determined the distributional impact across specialty groups of adopting a budget neutral version of the Medicare RBRVS. In the E&M Practice Expense study, The Lewin Group determined whether the practice expense component of the RVUs for E&M services in RBRVS is appropriately valued for the treatment of patients covered under workers' compensation and determined the financial implications of paying for E&M services adjusted for differences in work in a non-budget neutral fashion.

## **C. Evaluation and Management Services**

E&M services are central to the physician-patient relationship, as they incorporate three key components of the care provided by the physician: (1) taking and understanding a patient's medical history; (2) conducting a physical examination of the patient; and, (3) ultimately arriving at a medical decision to determine the proper course of treatment. Each E&M service has a descriptor associated with it that recognizes seven components that are used to define the level of the E&M service:

- History;
- Physical Examination;
- Medical Decision Making;
- Counseling;
- Coordination of Care;
- Nature of Presenting Problem;
- Time

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The first three components presented above are central for physicians when selecting the level of E&M service to bill.<sup>16</sup>

E&M services represent a significant portion of services provided by most physicians,<sup>17,18</sup> as well as a significant portion of workers' compensation claims in California. In the year 2000, E&M claims represented approximately 19 percent of workers' compensation expenditures for a subset of insurance carriers.<sup>19</sup>

Evaluation and management services are generally divided into five basic categories: office visits, hospital observation and inpatient services, consultations, emergency departments services, and nursing facility and other services. E&M services can range from a brief encounter to extended or complex visits with either new or established patients. New patient office visits are usually for an acute problem (e.g. an injury or a first visit for chronic care), and established patient visits are usually for more chronic problems.<sup>20</sup> E&M services are defined by variations in the content of service, the place of service, patient clinical status, the nature of the presenting problem, and the time required to perform the service. There are between three and five levels of services within each category or subcategory of E&M service.<sup>21</sup> Exhibit 1 presents categories, subcategories and codes for a sample of E&M services.

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<sup>16</sup> Health Care Financing Administration. (1999). *Medicare Resident Training* 5<sup>th</sup> Edition.

<sup>17</sup> American Geriatrics Society. (1993). Position statement on Physician Reimbursement under Medicare.

<sup>18</sup> American Medical Association. (2000). *Current Procedural Terminology CPT 2001*. Chicago: American Medical Association.

<sup>19</sup> For the RBRVS Study, The Lewin Group obtained a comprehensive data set of medical claims records from the California Workers' Compensation Institute (CWCI). CWCI receives medical services data from a number of carriers throughout California, whom collectively represent a significant share of the workers' compensation market. The CWCI data received by The Lewin Group contained medical bill records submitted by four carriers. The medical bill records file contained a total of 4,132,063 unique CPT service level records with dates of service between January 1, 2000 and December 31, 2000. This database of medical bills was compiled from 116,548 unique workers' compensation claims (injured workers). These data were not pre-selected and included all service records processed by CWCI as of September 1, 2001. The estimate presented above was obtained from modeled payments based on the CWCI data for calendar year 2000. California Workers' Compensation RBRVS Study, The Lewin Group, June 2002.

<sup>20</sup> E&M services more specifically include the following categories of services: office or other outpatient services, hospital observation services, hospital inpatient services, consultations, emergency department services, critical care services, nursing facility services, domiciliary, rest home or custodial care services, home services, prolonged services, case management services, care plan oversight services, preventative medicine services, and special E&M services. American Medical Association. (2000). *Current Procedural Terminology CPT 2001*. Chicago: American Medical Association.

<sup>21</sup> Ibid.

## Exhibit 1 Categories of E&M Codes

| Category/Subcategory                            | Code Numbers   |
|---|----------------|
| Office or Other Outpatient Services             |                |
| New Patient                                     | 99201 -- 99205 |
| Established Patient                             | 99211 -- 99215 |
| Hospital Observation Discharge Services         | 99217          |
| Hospital Observation Services                   | 99218 -- 99220 |
| Hospital Observation or Inpatient Care Services | 99234 - 99236  |
| Hospital Inpatient Services                     |                |
| Initial Hospital Care                           | 99221 -- 99223 |
| Subsequent Hospital Care                        | 99231 -- 99233 |
| Hospital Discharge Services                     | 99238 -- 99239 |
| Consultations                                   |                |
| Office Consultations                            | 99241 -- 99245 |
| Initial Inpatient Consultations                 | 99251 -- 99255 |
| Follow-up Inpatient Consultations               | 99261 -- 99263 |
| Confirmatory Consultations                      | 99271 -- 99275 |
| Emergency Department Services                   | 99281 -- 99288 |
| Critical Care Services                          | 99291 -- 99292 |
| Nursing Facility Services                       |                |
| Special E/M Services                            | 99450 -- 99456 |
| Other E/M Services                              | 99499          |

Source: American Medical Association. Current Procedural Terminology 2001.

The categories/subcategories are also referred to as “families” of E&M codes. Implicit is an increase in physician work as the codes increase within a family, i.e., code 99205 is of higher intensity than code 99201, and subsequently has a higher RVU and payment associated with it. Physicians choose the appropriate CPT code to bill based on the activities conducted by himself/herself and his/her staff before, during, and after the visit. It is important to note that physicians choose the appropriate CPT code to bill based on all the inputs required to perform a service, which in addition to physician work may include practice expense.

### D. Physician Work Measurement

Both qualitative and quantitative methods were used in the Physician Work study to determine the extent to which additional skill, time, and judgment might be needed to provide E&M services to workers’ compensation patients. Additional activities specific to the workers’ compensation clinical-legal environment may include some or all of the following: (1) determining work restrictions, (2) evaluating psychosocial issues unique to injured workers, (3) reviewing job analyses, and (4) educating workers and employers about early return to work.

#### 1. Order of Magnitude Estimation

Order of magnitude estimation is a “psychophysical” method used by researchers to obtain accurate relative measurements of human performance. The Harvard researchers that developed the RBRVS adapted an order of magnitude estimation approach to measure physician work. For the physician work study, The Lewin Group also utilized magnitude

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estimation for scaling the perceived magnitude of physician work over a given range of codes. With magnitude estimation, survey participants estimate the amount of physician work required to perform a particular service by comparing it to the work required to perform a reference service. The Lewin Group has used this approach on numerous occasions and has found the results to be consistent with those of other study teams.

As mentioned earlier, in the RBRVS, payments for medical services are based on relative value units (RVUs) that reflect the relative resource costs required to perform a service. The RVUs assigned to each code initially by Harvard and later by CMS researchers were intended for use in **all** payment settings, not just Medicare.

## **2.    *The RUC***

The AMA Resource-Based Relative Value Scale Update Committee (RUC) has adopted an order of magnitude estimation approach for measuring physician work.<sup>22</sup> The RUC approach is the accepted standard methodology for relative value determination. The RUC, which is comprised of members of the AMA as well as national medical specialty societies, submits recommendations on the RVUs to be assigned to new and revised codes in the CPT based upon its analysis of the evidence provided by physician specialty groups to CMS. A standard set of definitions for the components of physician work are presented in the RUC survey instrument itself.<sup>23</sup> Utilizing the RUC approach, specialty societies can adapt the RUC survey instrument and then survey at least 30 physicians in their specialty on the physician work required in the new and/or revised CPT codes. The RUC physician work survey is designed to elicit estimates from physicians regarding the relative work involved in the CPT code(s) of interest, as compared to a reference code. The RUC also requires analytic results from the surveys to be presented in a standard format.<sup>24</sup> The RUC's advisory committee then presents the specialty society's recommendations based on the survey results and the RUC then decides whether to adopt the specialty's recommendation or modify it before it is submitted to CMS. (On average, CMS accepts approximately 90 percent of RUC recommendations annually.<sup>25</sup>)

## **3.    *Reliability and Validity***

Two important issues that are often raised when considering any type of measurement are the reliability and validity of the results. In the context of physician work measurement, reliability is the ability of different physician groups to produce the same results on a given set of physician work RVU estimations. Physician work estimates have been proven to be highly consistent from one group of physicians to another, i.e., work equivalence has been documented across specialties.

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<sup>22</sup> The source of the information presented in this section is the American Medical Association/Specialty Society RVS Update Committee. Physician Work RVS Update Survey.

<sup>23</sup> There is also an AMA RUC survey to estimate components of practice expense.

<sup>24</sup> Johnson S, Newton W. (2002). Resource-based relative value units: A primer for academic family physicians. *Family Medicine*, 34(3): 172-176.

<sup>25</sup> [www.ama-assn.org/ama/pub/printcat/3140.html](http://www.ama-assn.org/ama/pub/printcat/3140.html)

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Validity is defined as “... the appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores...”<sup>26</sup> It is difficult to determine the validity of physician work relative value estimates externally. However, physician judgments on relative physician work have been accepted as valid by both public and private policy makers, including both CMS and AMA for approximately 10 years.

## **E. Overview of Report**

This report is divided into three sections. We begin with a description of the methodology, then present results from the various study activities. We conclude with a discussion of the results.

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<sup>26</sup> Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Lawrence Erlbaum Associates.

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## II. METHODS

In this section of the report, we describe our methods for developing revised RVUs for each of the E&M codes in the OMFS. We developed the revised workers' compensation RVUs in the following seven steps; each of which is described below. A guiding principle throughout the project was to be as inclusive as possible and to elicit input from a broad range of stakeholders. To achieve this objective, we made every effort to include in all study activities as many workers' compensation physicians as possible across all the various specialties that provide services to injured workers. A second guiding principle was to follow the time-tested AMA RUC process as closely as possible.

**Step 1:** Developed Preliminary Draft of Physician Work Survey Instrument

**Step 2:** Convened Technical Advisory Panel

**Step 3:** Refined Physician Work Survey Instrument

**Step 4:** Administered Physician Work Survey Instrument

**Step 5:** Data Analysis

**Step 6:** Extrapolation to Non-Surveyed Codes

**Step 7:** Determined Financial Implications of Increase in Physician Work RVUs

### **Step 1: Developed Preliminary Draft of Physician Work Survey Instrument**

We conducted a focused review of the literature at the outset of the study, including materials developed by the AMA's RUC. The RUC regularly submits recommendations to CMS regarding the physician work RVUs to be assigned to new or revised codes in the CPT based upon its analysis of the evidence provided by physician specialty groups. Specialty societies have adapted the survey instrument developed by the AMA and have administered it to members. The RUC survey is designed to elicit estimates from physicians of the relative work involved in the CPT code(s) of interest, as compared to a reference code(s). The RUC then decides whether to accept the society's recommendations regarding the RVUs for the new or revised codes and, if accepted, submits the recommendations to CMS.

The Lewin Group based the methodology for the Physician Work study upon the RUC process and survey. The survey provides definitions of the components of physician work (time, mental effort and judgment, technical skill, physical effort, and psychological stress), as well as definitions of service periods. See Appendix A for the RUC physician work survey instrument.

"Physician work" includes the following elements:

- Physician time it takes to perform the service.
- Physician mental effort and judgment.
- Physician technical skill and physical effort, and

- Physician psychological stress that occurs when an adverse outcome has serious consequences.

Physician work does not include the services of support staff that are employed in a physician's practice and who cannot bill separately. These support staff can include registered nurses, licensed practical nurses, medical secretaries, receptionists, and technicians. The expenses involved with the services provided by these types of staff are covered in the practice expense RVUs, and not the physician work RVUs. The RUC also defines the service periods that are involved when a physician is providing an E&M service. See Exhibit 2 for definitions of the service times associated with an office/outpatient visit and an inpatient or nursing facility visit.

## Exhibit 2 Definitions of Service Times

| SITE OF SERVICE                    | PRE-SERVICE   | INTRA-SERVICE  | POST-SERVICE  |
|------------------------------------|---|--|---|
| <b>Office/Outpatient</b>           | Includes services provided before the service and may include preparing to see the patient, reviewing records, and communicating with other professionals.  | Includes services provided while physicians are with the patient and/or family. This includes the time in which the physician obtains the history, performs an evaluation, and counsels the patient.   | Services provided after the service and may include arranging for further services, reviewing the results of studies, and communicating further with the patient, family, and other professionals which includes written and telephone reports.                                 |
| <b>Inpatient/ Nursing Facility</b> | Includes services that are not performed on the patient's hospital unit or floor, including: communications with other professionals and the patient's family; obtaining and/or reviewing the results of diagnostic tests and other studies; and written telephone reports. | Includes the services provided while physicians are present on the patient's hospital unit or floor, including: reviewing the patient's chart, seeing the patient, writing notes, and communicating with other professionals and the patient's family. | Includes services that are not provided on the patient's hospital unit or floor, including: communicating further with other professionals and the patient's family, obtaining and/or reviewing the results of diagnostic and other studies, and written and telephone reports. |

We modified the RUC survey instrument so that it was relevant and appropriate to workers' compensation. Survey respondents would be asked to develop estimates of physician work, as reflected in an RVU, by completing the following three tasks:

**Task 1 – Physician Work Component Valuation:** The survey participant would determine the extent to which **actual** physician work involved in providing E&M service to injured workers differed from that of providing the same E&M service to other types of patients. Each component of physician work was to be evaluated separately (e.g., time, mental effort and judgment, technical skill and physical effort, and psychological stress).

**Task 2 – Initial Magnitude Estimation:** The survey participant would then estimate an initial physician work RVU for the service, based on subjectively combining and weighting the component values previously estimated. The RVU for the reference service was provided.

**Task 3 –Final Magnitude Estimation:** The survey participant, synthesizing the physician work RVU estimates in Tasks 1 and 2, plotting his or her initial RVU estimate on a scaling thermometer, and using his or her best judgment, would determine a final surveyed physician work RVU for the surveyed code within the context of the E&M code family. For example, in

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developing the final surveyed physician work RVU estimate, the participant might realize that there was relatively more (or less) mental effort and judgment involved in providing a particular E&M service to a workers' compensation patient compared to other types of patients. The participant would then examine the code comparatively, and might then assign it a higher (or lower) RVU than his or her initial estimate (that had been based only upon component valuation).

## **Step 2: Convened Technical Advisory Panel**

The second major project activity was to convene a Technical Advisory Panel (TAP). It has been our experience with advisory panels for various of our projects that having major stakeholders participate in the project at each stage of the process is essential. See Appendix B for materials regarding the TAP. The purpose of the TAP was to guide The Lewin Group in a number of activities throughout the course of the project, including: (1) selecting 20 codes to include in the Physician Work survey, (2) assisting the project team in selecting and/or developing reference codes (i.e., comparison codes), (3) developing clinical vignettes (i.e., brief patient descriptions) for each surveyed code, and (4) reviewing and commenting on the draft physician work survey instrument.

The Lewin Group received nominations for membership in the TAP from various medical associations and other stakeholder groups, as well as from members of the IMC. Our goal was to have a TAP comprised of each of the eight LC 3209.3 physician groups<sup>27</sup>, as well as any other appropriate medical specialties. Members were selected based on specialty, experience with both workers' compensation and non-workers' compensation patients, and expertise regarding physician payment issues. TAP members were asked to consider themselves as representing *medicine as a whole* rather than the interests of their individual specialties while serving on the TAP. Appendix C contains the name and specialty for each TAP member and Appendix D contains additional TAP materials.

The TAP was convened in mid-September, 2001 and met for two full-day sessions. At the beginning of the first day, the TAP was asked to adhere to the following principle:

**"Technical Advisory Panel members should view their role as providing technical advice in the development of the survey. This implies that no individual serves as an advocate for any single specialty or other group."**

After introductions and a discussion of study goals for the meeting, the TAP began their work by reviewing the draft of the physician work survey instrument for clarity and structure. Next, they selected a sample of 20 codes out of the 113 E&M codes in the OMFS to include in the survey.<sup>28</sup> The sampled codes represented each of the various "families" of E&M codes relevant to

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<sup>27</sup> The California Labor Code Section 3209.3 defines "physician" to include physicians and surgeons holding an M.D. or D.O. degree, psychologists, acupuncturists, optometrists, dentists, podiatrists, and chiropractic practitioners licensed by California state law and within the scope of their practice as defined by California state law.

<sup>28</sup> There are 128 E&M codes in the 2002 Medicare Physician Fee Schedule, compared to the 113 in the OMFS. The OMFS is primarily based on the 1997 AMA CPT, and hence there is a discrepancy in the number of E&M codes. We focused our analysis on the 92 E&M codes represented in the CWCI data.

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workers' compensation. One consideration in selecting the sample codes was to include a sufficient number of codes as to cover the multiple specialties treating injured workers, but not so many that the survey was overly burdensome. Another consideration was to include differing levels within a code family.

The TAP then developed vignettes to accompany the 20 sampled codes. The vignette represents a "typical patient," and should be recognized as such across specialties. Many vignettes were adapted from those contained in the AMA Current CPT manual. If vignettes appropriate to workers' compensation were not available in the AMA manual, TAP members developed their own.

On the second day, the TAP members identified reference codes to accompany the sampled codes. They also discussed the survey process, and the RUC-based analytic plan. The TAP also reviewed a cover letter that we proposed to send out along with the survey instrument during the by-mail phase of the survey. Prior to conducting the first in-person survey sessions, TAP members participated in a set of conference calls with The Lewin Group to discuss the final format, wording, and content of all Physician Work survey components.

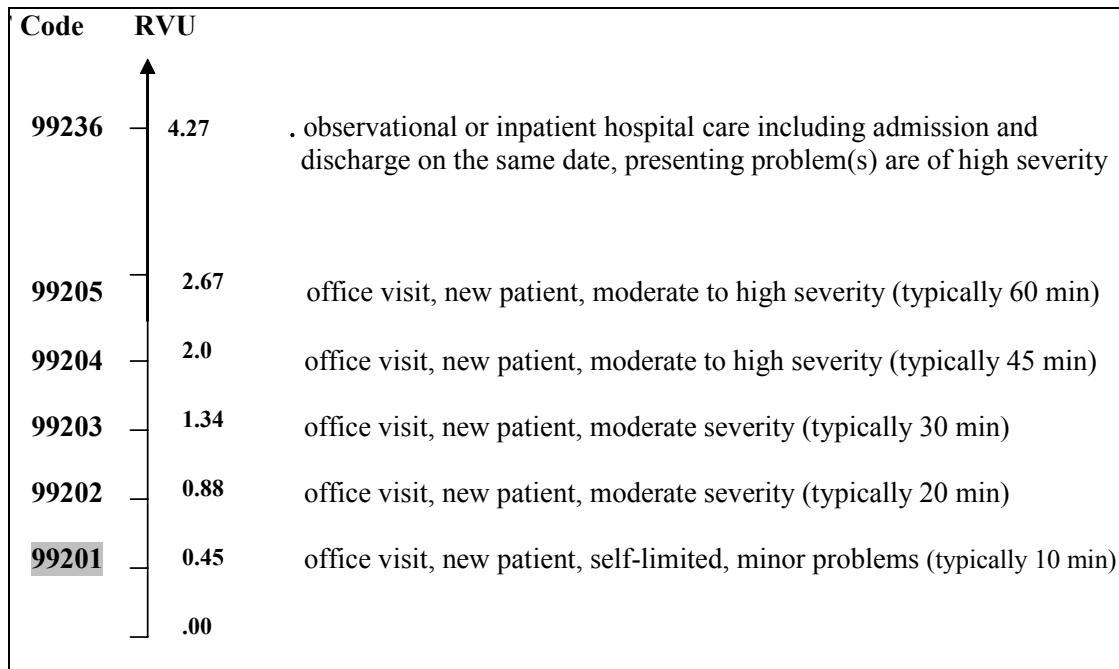
### **Step 3: Refined Physician Work Survey Instrument**

The physician work survey instrument was structured as follows. (See Appendix E for the complete physician work survey instrument.)

- |   |
|---|
| <ul style="list-style-type: none"><li>➤ Background Sheet</li><li>➤ Instructions</li><li>➤ CPT Descriptor for Surveyed Code</li><li>➤ Vignettes for Surveyed Code</li><li>➤ Physician Work Component Valuation</li><li>➤ Initial Magnitude Estimation</li><li>➤ Final Magnitude Estimation</li></ul> |
|---|

After receiving final input from the TAP, we refined the physician work survey instrument. We made two major changes to the survey instrument. First, we added an additional area on the vignette section of the survey in which respondents were asked to choose the vignette that best reflects their typical patient. We also added an area at the end of the patient vignettes section which offered the participant the option of responding that, although they bill the code, none of the vignettes are reflective of a typical patient for their practice. Second, after the respondent formulates an initial estimate of the physician work RVU, we added a "scaling thermometer" which graphically presented the physician work RVUs for other codes contained in the same family as the surveyed code. The scaling thermometer also included the physician work RVU for code 99236, which is the highest valued E&M code in the CPT. Respondents were asked to plot their initial physician work RVU estimate on the thermometer which reflected the family of E&M (and their corresponding physician work RVUs) as applied to non-workers' compensation patients. See Exhibit 3 below for an example of the scaling thermometer for E&M code 99201.

### Exhibit 3 Scaling Thermometer



Two key instructions were contained in the survey instrument and are presented below.

***Instruction #1: Note that Claim has been Accepted***

The TAP assisted with crafting and refining the wording within the Instructions section of the survey instrument. The text for Instruction #1 read as follows:

**“When you evaluate the work required in providing services to an injured worker, you should assume that the claim has been accepted by the employer/insurance company. For all reference services, you should assume that the service is not for a workers’ compensation patient. Services billed under the Medical-Legal Fee Schedule are not included in the survey.”**

In order for respondents completing the survey to consistently estimate the physician work involved when providing the surveyed codes, we needed to ensure that they were referring to the same set of physician activities. In general, activities relating to securing payment from insurance carriers typically fall under practice expenses, and therefore should have not been included in estimates of physician work. Consequently, we asked survey respondents not to include these activities in their estimates of physician work.

***Instruction #2: Separately Reimbursable Services***

It was also important to highlight to survey respondents that they were to include only the physician work activities pertaining to the code to be surveyed and not to include physician work activities associated with special reports and services that are an adjunct to the basic

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services rendered, and are separately reimbursable. For that reason, the survey instrument included a section presenting the services and codes that were not to be included in their responses. Those special reports and services include the following:

**99080** – Primary Treating Physician’s Permanent and Stationary Report; Report of Disability Status (RU 90) where employee is released to pre-injury occupation; Consultation reports

**99081** – Primary Treating Physician’s Progress Report (PR2) when in accordance with 8 CCR section 9785; Primary Treating Physician’s Final Discharge Report

**99048** – Telephone call with employer or appropriate agency in excess of 15 minutes

**99086** – Reproduction of chart notes

**99087** – Reproduction of duplicate reports

In contrast, physician work associated with reports that are not separately reimbursable but must be completed when providing E&M services **should** have been included in respondents’ physician work estimates. These reports include: the Doctor’s First Report of Occupational Illness or Injury; Initial Treatment Report and Plan; the Treating Physician’s Report of Disability Status (DWC Form RU-90) in which the physician has not been able to render an opinion regarding the employee’s ability to return to the pre-injury occupation; and the Report by a Secondary Physician to the Primary Treating Physician. The payment for these non-separately reimbursable reports is included in the payment for the underlying E&M office visit code.

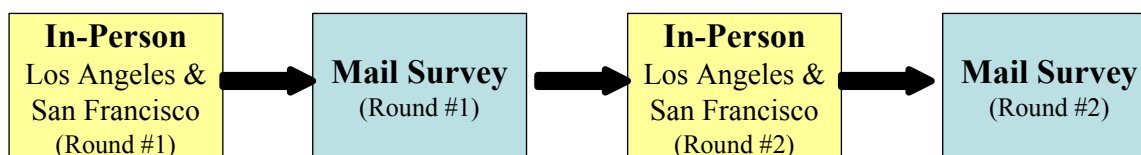
## Physician Work Survey Process

As discussed above, there were three basic tasks to complete in the Physician Work Survey process. In the first task, the physician was asked to separately value the four components of physician work. In the second task, the physician was to put the components together, weight them subjectively, and assign a single work RVU. In the third task, the physician was asked to make a final determination whether the initial estimate accurately reflected the components of physician work in relation to the other RVUs in the code family. The final survey estimate (hereafter referred to as the surveyed physician work RVU) thus reflects two mental operations: 1) a “sum of the parts” estimation, and 2) an estimation based upon how close the code was positioned to a related service.

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#### Step 4: Administered Physician Work Survey Instrument

We used a multiple-mode data collection strategy, which included two rounds of in-person survey sessions in Los Angeles and San Francisco, as well as two rounds of administration by-mail with telephone follow-up.



In-person survey sessions were conducted in order to assure a threshold number of responses to the survey. For the in-person survey sessions, we solicited nominations from members of the IMC, as well as medical associations. Appendix F contains materials presented during the in-person survey sessions. We selected attendees based on their experience treating both workers' compensation and non-workers' compensation patients. At the survey sessions, we also collected information on the specific types of physician activities that occur when providing E&M services to workers' compensation patients and asked respondents to explain the reasons why they reported an increase or decrease in physician work when providing services to workers' compensation patients. We conducted two sets of half-day in-person survey sessions: one in Los Angeles, and one in San Francisco. One advantage of the in-person sessions was that project staff were available to answer questions.

We also administered the survey by-mail to a random sample of physicians treating workers' compensation patients in California. The sample was pulled from three sources:<sup>29</sup> (1) a list of Qualified Medical Examiners, (2) a list of active providers who had billed various workers' compensation insurance carriers, and (3) a list of physicians in the current State of California Insurance Fund (SCIF) Preferred Provider Network. There were 22,423 individuals represented in the three lists. The lists were consolidated and cleaned to remove duplicates. After removing duplicates, the list consisted of 19,872 workers' compensation providers. Next, we removed physicians that had incorrect or flawed addresses. Of the remaining 17,913 physicians, 2,134 physicians were randomly selected to send the physician work survey instrument. Next, we examined the specialty composition of the sample to assure adequate numbers of each specialty were included. We added 166 additional physicians to the sample in order to increase the number of surveys sent to certain specialties under-represented in our randomly selected sample. The survey was initially sent to 2,300 workers' compensation providers in the spring of 2002. A cover letter, a project description, and a pre-paid mailer were sent along with each survey. A toll free hotline was established so that respondents could contact The Lewin Group if they had any questions regarding the survey. The survey was subsequently re-sent to a random sample of 500 of the original 2,300 physicians in order to increase both the response rate and representation across specialties.

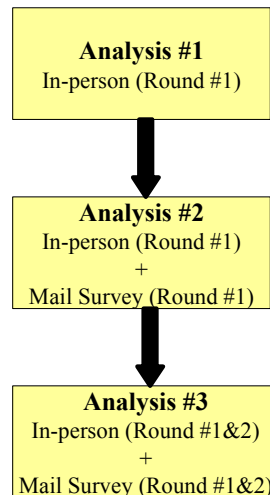
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<sup>29</sup> The three sources contained information on physicians current as of 2002.

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## Step 5: Data Analysis

We analyzed the survey responses at three points in time. The first was based on responses from the first round of in-person survey sessions. The second analysis was based on responses from the first round of the mail survey, combined with responses from the first survey session, in order to learn if the mode of data collection influenced the quality or pattern of responses. We found no systematic differences between in-person survey and by-mail survey responses. The third analysis included responses from all modes of collection. Results of each analysis were consistent.



Although the survey collected information on the components comprising physician work RVU estimates, we limited our analyses to respondents' final surveyed physician work RVU estimates. We began each analysis by plotting individual surveyed physician work RVU estimates for each of the twenty surveyed codes. Next we calculated medians for each code.<sup>30</sup> Then we compared the median surveyed physician work RVUs to the RBRVS physician work RVUs for each of the twenty surveyed E&M codes by calculating the ratio of Surveyed RVUs to RBRVS physician work RVUs. This ratio provided a benchmark of workers' compensation physician work to the physician work involved in treating other types of patients.

It is important to note that if a physician did not perform one of the surveyed E&M codes in practice, he or she was asked to skip the question. Thus, we obtained varying item response rate across the 20 surveyed codes.

## Step 6: Extrapolation to Non-Surveyed Codes

The next part of the analysis was to develop a regression approach to predict work values for non-surveyed E&M code values based on each individual respondent's surveyed physician

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<sup>30</sup> The RUC uses the median of surveyed codes to establish physician work RVUs.

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work RVU for each of the 20 codes. We had previously used a variant of this type of analysis when The Lewin Group developed physician work estimates for psychotherapy codes.<sup>31</sup>

As mentioned earlier, we surveyed a sample of 20 out of 113 E&M codes in the OMFS. Because the RUC uses the median of surveyed codes to establish physician work RVUs, we performed a median regression analysis using each respondent's surveyed physician work RVU to calculate revised physician work RVUs for each code.<sup>32</sup> We produced revised physician work RVUs for all E&M codes based on the median regression analysis, including our 20 surveyed codes. Next, we compared the revised physician work RVUs with surveyed physician work RVUs and RBRVS physician work RVUs to further verify the accuracy and consistency of our approach.

### **Step 7: Determined Financial Implications of Increase in Physician Work RVUs**

The final step was to estimate the budgetary impact of the revised E&M physician work RVUs on total OMFS payments in a non-budget neutral fashion, using the revised workers' compensation physician work RVUs.

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<sup>31</sup> .The Lewin Group. (1998) *Proposed Work Values for New Psychotherapy CPT Codes*. Prepared for the Relative Value Update Committee Meeting.

<sup>32</sup> We tested various regression approaches to develop "predicted" physician work RVUs. We then compared the surveyed and predicted physician work RVUs to RBRVS physician work RVUs for each of the 20 surveyed codes. The median regression approach most closely matched median surveyed work values on a code by code basis.

### III. RESULTS

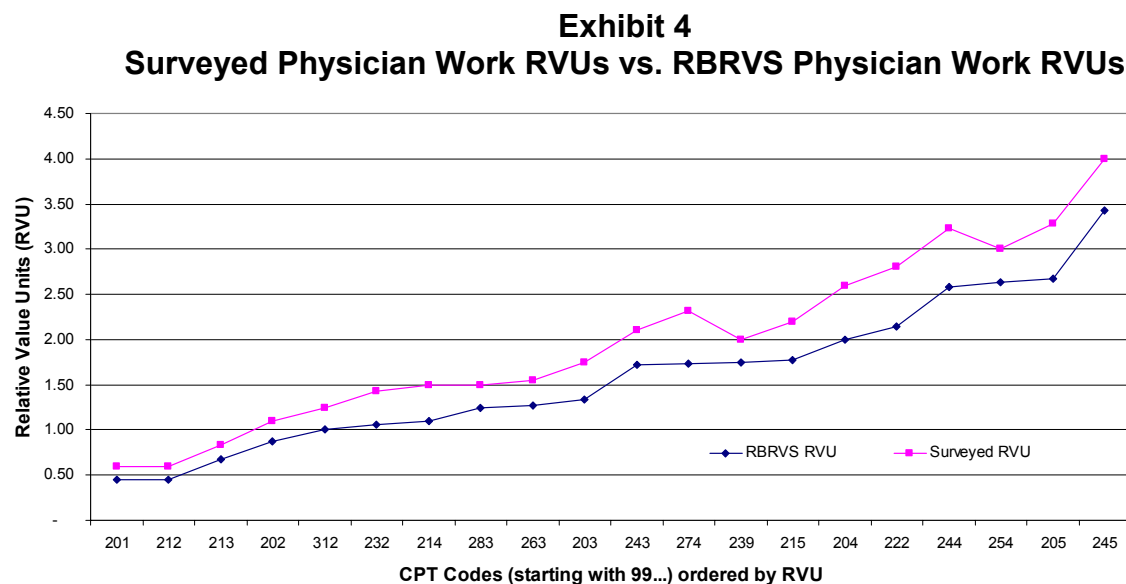
In this section of the report, we present the results of our analyses. We have organized the section to present our analytic results concerning the physician work for the surveyed codes, followed by the results of our median regression analysis. We then present the financial impact analysis, followed by a description of sample characteristics and end with a section summarizing respondent rationales for increases in physician work when treating workers' compensation patients. Refer to Appendix G and Appendix H for a presentation of the results.

We use the physician work RVUs contained in the 2002 Medicare National Fee Schedule Relative Value File as a basis for comparison and refer to those RVUs as RBRVS physician work RVUs. We compare the surveyed physician work RVUs to the RBRVS physician work RVUs. The surveyed physician work RVUs were higher than the RBRVS physician work RVUs in all instances. Furthermore, we found that the percent increase in the revised workers' compensation physician work RVUs relative to RBRVS physician work RVUs tended to decline with increasing complexity of E&M service within families. This suggests that workers' compensation E&M work input or "overhead" is relatively fixed, and declines as a percentage of the base RVU as the base RVU increases.

#### A. Analytic Results

##### 1. *Surveyed Physician Work RVUs Compared to RBRVS Physician Work RVUs*

Exhibit 4 contains the surveyed physician work RVUs for the 20 sampled E&M codes, as well as the RBRVS physician work RVUs for the codes in order to provide context. For each code, RVUs obtained from the survey respondents are consistently higher than those taken from the RBRVS.



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## **2. Overall and Participant Group Mean Ratios of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs**

The ratios of the surveyed physician work value to the RBRVS physician work value were comparable across all respondent groups. The overall mean ratio of surveyed physician work RVUs to RBRVS physician work RVUs for the 20 surveyed codes was 1.28. The ratio of 1.28 means that physician work for E&M codes for workers' compensation patients was about 28% greater than that for other types of patients. Exhibit 5 contains these ratios for each of the three respondent groups and the overall mean ratio.

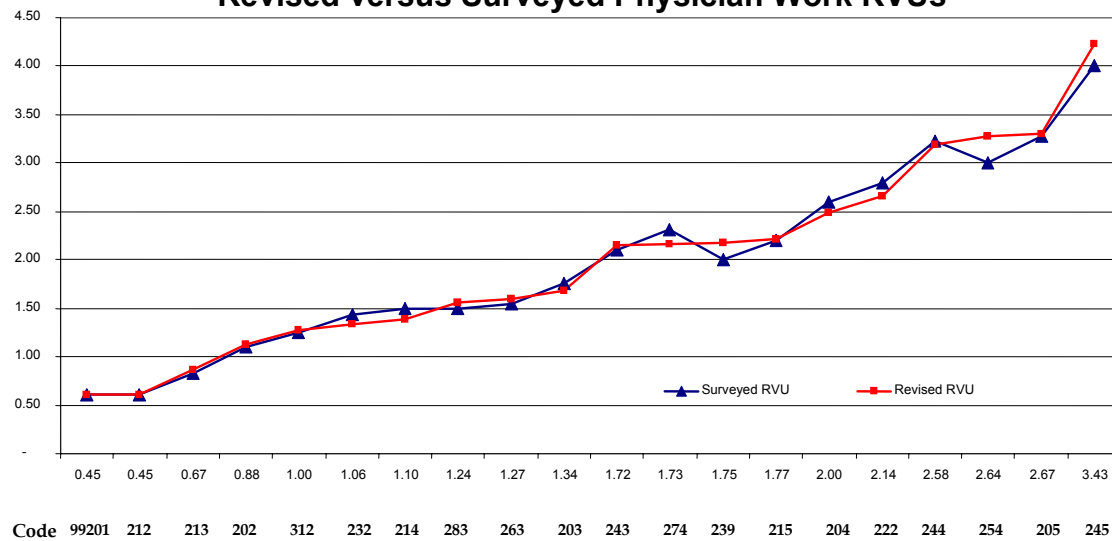
**Exhibit 5**  
**Mean Ratios of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs**

| <b>Participant Group</b>     | <b>Mean Ratio of Surveyed Physician Work RVUs to RBRVS Physician Work RVUs</b> |
|------------------------------|--|
| Los Angeles Survey Session   | 1.32   |
| San Francisco Survey Session | 1.23   |
| Mail Respondents             | 1.27   |
| <i>Overall Mean Ratio</i>    | <i>1.28</i>  |

## **3. Revised versus Surveyed Physician Work RVUs**

As discussed in the methodology section of this report, a median regression equation was estimated to extrapolate from the 20 surveyed codes and predict physician work RVUs for all E&M codes. Exhibit 6 presents graphically the revised physician work RVUs and the surveyed physician work RVUs for the 20 surveyed E&M codes. The revised physician work RVUs very closely approximate the surveyed physician work RVUs for all 20 surveyed codes.

**Exhibit 6**  
**Revised versus Surveyed Physician Work RVUs**



In those instances where departures are evident, the regression results turned out to be more consistent one code to the next.

#### **4. Revised Physician Work RVUs**

The revised physician work RVUs for all E&M codes in the OMFS based on the median regression analysis are presented in Appendix H. Exhibit 7 below presents the item response as well as the revised physician work RVUs for the 20 E&M codes included in the physician work survey. Item response was greatest for the office/outpatient setting. The revised physician work RVUs for both the surveyed and the non-surveyed codes were derived from the median regression analysis.

## Exhibit 7

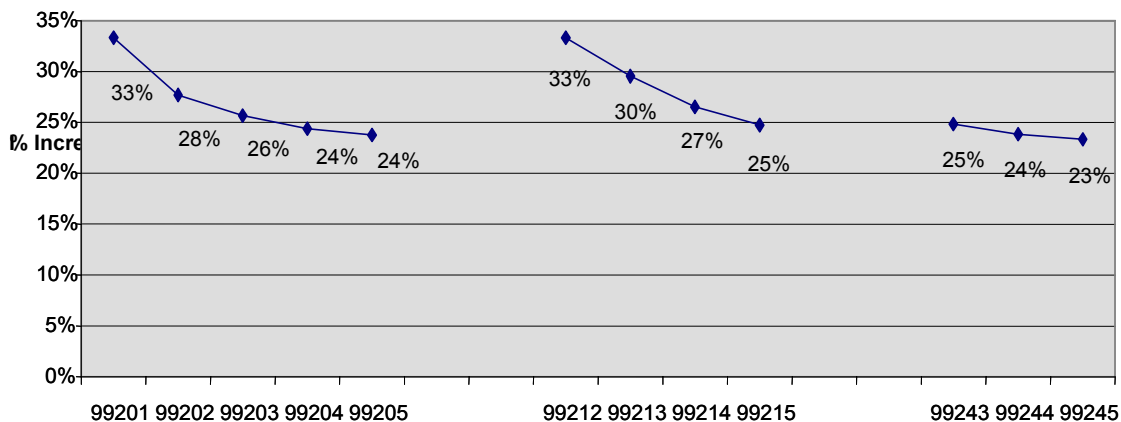
### Revised Physician Work RVUs

| CPT Codes                                  | Descriptor (Source CPT Manual 2001)   | Survey Item Response (N) | Revised Work RVUs |
|--|---|--------------------------|-------------------|
| OFFICE VISIT - NEW                         |   |                          |                   |
| 99201                                      | Office/outpatient visit, new , presenting problems are self-limited/minor.  | 44                       | 0.60              |
| 99202                                      | Office/outpatient visit, new , presenting problems of low to moderate severity.   | 52                       | 1.12              |
| 99203                                      | Office/outpatient visit, new , presenting problems of moderate severity.  | 67                       | 1.68              |
| 99204                                      | Office/outpatient visit, new , presenting problems of moderate to high severity.  | 75                       | 2.49              |
| 99205                                      | Office/outpatient visit, new , presenting problems of moderate to high severity.  | 66                       | 3.30              |
| OFFICE VISIT - ESTABLISHED                 |   |                          |                   |
| 99212                                      | Office/outpatient visit, established , presenting problems are self-limited/minor.  | 68                       | 0.60              |
| 99213                                      | Office/outpatient visit, established , presenting problems of low to moderate severity.   | 77                       | 0.87              |
| 99214                                      | Office/outpatient visit, established , presenting problems are of moderate to high severity.  | 73                       | 1.39              |
| 99215                                      | Office/outpatient visit, established , presenting problems are of moderate to high severity.  | 69                       | 2.21              |
| INITIAL HOSPITAL CARE PER DAY              |   |                          |                   |
| 99222                                      | Initial hospital care per day , problem(s) requiring admission is of moderate severity.   | 17                       | 2.66              |
| SUBSEQUENT HOSPITAL CARE PER DAY           |   |                          |                   |
| 99232                                      | Subsequent hospital care per day , patient is responding inadequately to therapy or has a minor complication.   | 20                       | 1.34              |
| HOSPITAL DISCHARGE DAY                     |   |                          |                   |
| 99239                                      | Hospital discharge day , > 30 min spent for final hospital discharge of a patient. Includes final examination, discussion, instructions, preparation of records, prescriptions. | 18                       | 2.18              |
| OFFICE CONSULTATION                        |   |                          |                   |
| 99243                                      | Office consultation , new or established patient, presenting problem(s) of moderate severity.   | 50                       | 2.15              |
| 99244                                      | Office consultation , new or established patient, presenting problem(s) of moderate to high severity.   | 63                       | 3.19              |
| 99245                                      | Office consultation , new or established patient, presenting problem(s) of moderate to high severity.   | 55                       | 4.23              |
| INPATIENT CONSULT - INITIAL                |   |                          |                   |
| 99254                                      | Initial inpatient consult , new or established patient, presenting problem(s) of moderate to high severity.   | 21                       | 3.27              |
| INPATIENT CONSULT - FOLLOW-UP              |   |                          |                   |
| 99263                                      | Follow-up inpatient consult , established patient, unstable or developed a severe complication or a significant new problem.  | 15                       | 1.60              |
| CONFIRMATORY CONSULTATION                  |   |                          |                   |
| 99274                                      | Confirmatory consultation , new or established patient, problem(s) of moderate to high severity.  | 27                       | 2.16              |
| EMERGENCY DEPARTMENT VISIT                 |   |                          |                   |
| 99283                                      | Emergency department visit , presenting problem(s) of moderate severity.  | 16                       | 1.56              |
| NURSING FACILITY CARE PER DAY - SUBSEQUENT |   |                          |                   |
| 99312                                      | Nursing facility care per day , subsequent , new or established, patient is responding inadequately to therapy or has developed a minor complication.                           | 9                        | 1.27              |

## 5. *Percent Increase in Revised Physician Work RVUs Relative to RBRVS Physician Work RVUs*

Exhibit 8 below presents the percent increase in revised workers' compensation physician work RVUs compared to the RBRVS physician work RVUs for three large families of E&M codes: office visits for new patients; office visits for established patients; and office consultations for new or established patients. We calculated the ratio of the surveyed physician work RVU to the RBRVS physician work RVU and plotted the percent increase. For example, the RBRVS physician work RVU for code 99201 is 0.45 and the revised physician work RVU for the same code (based on the survey responses and the median regression) was 0.60. The ratio of the two is 1.33, or a 33 percent increase over the RBRVS physician work RVU. We can see in the exhibit, that for each family of E&M codes, the lowest intensity code that was surveyed within each family (99201, 99212, 99243) had the greatest percent increase in revised physician work RVU. The remaining codes within each family had progressively smaller percent increases.

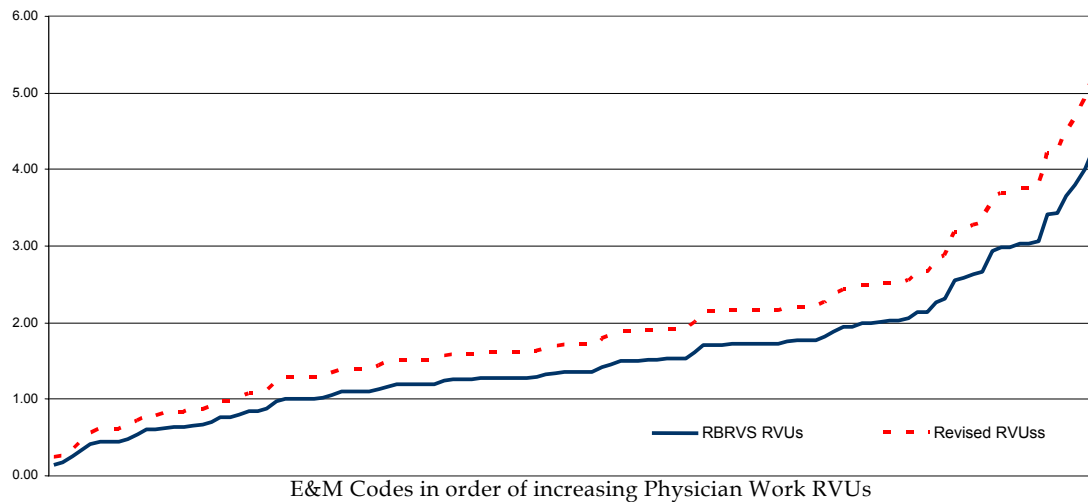
**Exhibit 8**  
**Percent Increase in Revised Physician Work RVUs**



## 6. *Revised versus RBRVS Physician Work RVUs for all E&M Codes*

Exhibit 9 presents the revised physician work RVUs compared to the RBRVS physician work RVUs for all the E&M codes. The E&M codes are arranged in order of increasing RBRVS physician work RVUs. The revised physician work RVUs are greater than the RBRVS physician work RVUs across all codes. These results indicate that the median regression approach provided consistent results one code to the next.

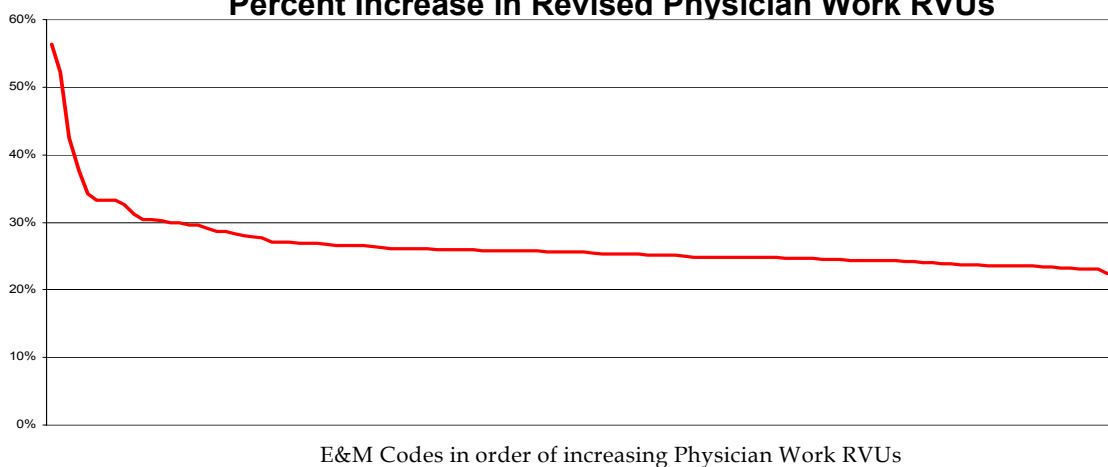
## Exhibit 9 Revised versus RBRVS Physician Work RVUs



### 7. *Percent Increase in Revised Physician Work RVUs Compared to RBRVS Physician Work RVUs for all E&M Codes*

Exhibit 10 below presents the percent increase in the revised physician work RVUs, with the E&M codes arranged in increasing order based on RBRVS physician work RVUs. The percent increase in the revised physician work RVUs relative to RBRVS physician work RVUs tended to decline with increasing complexity of E&M service. The initial high percentages are consistent with the contention that workers' compensation patients are associated with a relatively fixed amount of work overhead irrespective of the underlying value of E&M code physician work.

## Exhibit 10 Percent Increase in Revised Physician Work RVUs



## B. Impact of Survey Results

We estimated the payment for all E&M codes using our revised workers' compensation physician work RVUs and compared it to the actual payment for the codes. We then divided by the total actual payment for all codes in order to obtain the impact of the increase in physician work RVUs for E&M services. Results of the Physician Work study indicate that there would be an increase in total physician payment of 3.25 percent.

### Exhibit 11 Impact of Survey Results

|          |  |           |                    |
|----------|--|-----------|--------------------|
| <b>A</b> | <b>Payment for all E/M Codes using Revised Physician Work RVU Values</b>         | <b>\$</b> | <b>57,333,609</b>  |
| <b>B</b> | <b>Baseline E/M payment using RBRVS Budget Neutral Payments</b>                  | <b>\$</b> | <b>50,316,739</b>  |
| <b>C</b> | <b>Increase in E/M payment due to Revised E&amp;M Physician Work RVUs</b>        | <b>\$</b> | <b>7,016,870</b>   |
| <b>D</b> | <b>Total Payment (all codes)</b>   | <b>\$</b> | <b>215,577,690</b> |
| <b>E</b> | <b>% Increase from Baseline</b> $[(\text{Row A} - \text{Row B}) / \text{Row D}]$ |           | <b>3.25%</b>       |

## C. Survey Respondents

In the next section of the report we present the characteristics of the survey respondents.

### 1. Response Rate by Method

We received a total of 87 completed surveys across the two data collection methods. The RUC recommends a minimum sample size of 30, therefore our response rate was almost three times that recommended by the RUC. The number of responses by in-person session and mail survey is presented in Exhibit 12.

### Exhibit 12 Sample Composition

| <b>Strategy</b>           | <b>Number of Responses</b> | <b>% of Total Responses</b> |
|---------------------------|----------------------------|-----------------------------|
| In-Person Survey Sessions | 48                         | 55.2 %                      |
| Mail Survey               | 39                         | 44.8%                       |
| <b>Total</b>              | <b>87</b>                  | <b>100.0%</b>               |

The findings regarding survey respondents are presented in a manner consistent with that requested by the RUC for specialty societies submitting data.

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## 2. Practice Setting

Approximately half of the respondents described themselves as solo practitioners. The second most common type of practice setting was a single specialty group (32%), followed by a multi-specialty group (14%). Exhibit 13 contains the distribution of practice setting types within the sample.

**Exhibit 13**  
**Practice Setting**

| Type                    | Number of Responses | % of Total Responses |
|-------------------------|---------------------|----------------------|
| Solo Practitioner       | 43                  | 49%                  |
| Single Specialty Group  | 28                  | 32%                  |
| Multi Specialty Group   | 12                  | 14%                  |
| Academic Medical Center | 1                   | 1%                   |
| Unknown                 | 3                   | 3%                   |
| Total                   | 87                  | 100%                 |

## 3. Practice Characteristics

Exhibit 14 contains the practice locations of the sampled respondents. Most respondents practiced in urban areas (49%), followed by suburban areas (43%).

**Exhibit 14**  
**Practice Location**

| Type     | Number of Responses | % of Total Responses |
|----------|---------------------|----------------------|
| Rural    | 4                   | 6%                   |
| Suburban | 37                  | 43%                  |
| Urban    | 43                  | 49%                  |
| Unknown  | 3                   | 3%                   |
| Total    | 87                  | 100%                 |

## 4. Years in Specialty and Workers' Compensation

Respondents had a great deal of experience treating patients in general, and treating workers' compensation patients, specifically. Exhibit 15 contains the tenure of the sample.

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**Exhibit 15**  
**Years in Specialty and Workers' Compensation**

|                |                    |                                | % Time Evaluating Patients     |                                    |
|----------------|--------------------|--------------------------------|--------------------------------|------------------------------------|
|                | Years in Specialty | Years in Workers' Compensation | Workers' Compensation Patients | Non-Workers' Compensation Patients |
| <b>Mean</b>    | 20                 | 16                             | 52%                            | 43%                                |
| <b>Median</b>  | 10                 | 15                             | 50%                            | 40%                                |
| <b>Minimum</b> | 3                  | 2                              | 1%                             | 0%                                 |
| <b>Maximum</b> | 42                 | 42                             | 100%                           | 99%                                |

## 5. Specialty

Exhibit 16 contains respondent distribution across specialties. Survey respondents were well distributed across specialties, and mirrored the specialty distribution of physicians treating injured workers. In the California Workers' Compensation Institute (CWCI) data<sup>33</sup>, the most prevalent types of specialists providing the 20 surveyed E&M services to injured workers were primary care physicians, orthopedic surgeons and chiropractors.<sup>34</sup> CWCI receives medical services data from a number of carriers throughout California, whom collectively represent a significant share of the workers' compensation market.

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<sup>33</sup> For the RBRVS Study, The Lewin Group obtained a comprehensive data set of medical claims records from the California Workers' Compensation Institute (CWCI). CWCI receives medical services data from a number of carriers throughout California, whom collectively represent a significant share of the workers' compensation market. The CWCI data received by The Lewin Group contained medical bill records submitted by four carriers. The medical bill records file contained a total of 4,132,063 unique CPT service level records with dates of service between January 1, 2000 and December 31, 2000. This database of medical bills was compiled from 116,548 unique workers' compensation claims (injured workers). These data were not pre-selected and included all service records processed by CWCI as of September 1, 2001.

<sup>34</sup> A listing of specialty groups arranged in order of frequency of providing the 20 surveyed E&M codes is as follows: clinics, groups associations; general practice; unspecified; orthopedic surgery; hospitals and chiropractors.

## Exhibit 16 Specialty Composition

| Specialty                            | Number | Percentage of Total (%) |
|--------------------------------------|--------|-------------------------|
| Acupuncture                          | 4      | 5%                      |
| Anesthesiology                       | 1      | 1%                      |
| Chiropractic                         | 17     | 20%                     |
| Dental Medicine                      | 4      | 5%                      |
| Emergency Medicine                   | 2      | 2%                      |
| Neurology                            | 4      | 5%                      |
| Occupational Medicine                | 8      | 9%                      |
| Ophthalmology                        | 1      | 1%                      |
| Optometry                            | 1      | 1%                      |
| Orthopedics                          | 17     | 20%                     |
| Physical Medicine and Rehabilitation | 1      | 1%                      |
| Podiatry                             | 3      | 3%                      |
| Primary Care*                        | 9      | 11%                     |
| Psychiatry                           | 4      | 5%                      |
| Psychology                           | 3      | 3%                      |
| Surgery                              | 6      | 7%                      |
| Urology                              | 1      | 1%                      |
| Total                                | 87     | 100%                    |

\* Primary care includes family practice, general practice and internal medicine.

### D. Rationale for Increase in Physician Work for Workers' Compensation Patients

Survey respondents reported a myriad of factors that led to the perceived increase in physician work when providing services to workers' compensation patients in a set of open-ended questions asked at the end of the in-person sessions. These additional physician work activities included:

- **More involved review of patient records by physician**
- **Disability management**
- **Determination of causation**
- **Return to work issues and associated paperwork**
- **Phone calls by physician between employers and insurance carriers**
- **Additional psychological stress issues that injured workers' may have**
- **"Hand holding" and education of injured workers**
- **Non-reimbursable reports**

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In general, physicians expressed what they believed to be a simple truth: workers' compensation patients require more physician work than other types of patients. Providing medical services to workers' compensation patients in California, like in other states, requires physicians to operate in a complex medical-legal world of opposing objectives, with employers and insurance carriers often on one end of the spectrum, injured worker on the other, and physicians in between. This causes physicians to engage in activities that they would not engage in when providing care to non-industrial patients. For example, disability management and return-to-work issues are virtually absent for non-workers' compensation patients, yet are a central focus when treating injured workers. Furthermore, many physicians reported that workers' compensation patients have more psychological stress issues associated with their injuries than other types of patients due to potential loss of employment and financial considerations. Managing these types of issues also leads to perceived increases in physician work.

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## IV. CONCLUSIONS

This study was designed to determine if physician work for E & M codes is greater than, equal to, or less than that for worker's compensation patients in comparison to care provided to other patients. The study approach is modeled after that used by CMS and AMA in the RUC process. We attempted to be as inclusive as possible of the workers' compensation physician community throughout the course of the study by eliciting participation and feedback from a broad range of stakeholders. Study results are highly consistent, one code to the next, and are largely consistent across various segments of the survey sample. Finally, we did not detect any appreciable differences in results across the various specialty groups.

Two study results predominate. The first is that physician work for E & M code sources is about 28 percent greater for workers compensation patients. The second is that this percentage increase is relatively stable one E & M code to the next, with a predictable decline as the underlying values in Medicare RBRVS increase within a code family. From a financial perspective, if these increases were paid in a budget neutral fashion, overall workers' compensation expenditures would rise by just over 3 percent, a relatively modest amount given the importance of physician payment equity.

Study results are consistent with the workers' compensation community's views that workers compensation reflects both clinical and legal activities which are inextricably related to the employee's return to work. This observation has important ramifications in that attempts to reduce the overall level of workers' compensation expenditures in any meaningful fashion will necessitate a fundamental revision of the legal and behavioral framework in which clinical services are provided to worker's compensation patients.

# Appendix A

## RUC Physician Work Survey Instrument

**The American Medical  
Association/Specialty Society  
RVS Update Committee**

**PHYSICIAN WORK  
RVS Update Survey**

New/Revised CPT Code:

Global Period: XXX

CPT Code Descriptor:

Typical Patient/Service:

## INTRODUCTION

### Why should I complete this survey?

The AMA/Specialty Society RVS Update Committee (RUC) and the \_\_\_\_\_ needs your help to assure relative values will be accurately and fairly presented to HCFA during this revision process. This is important to you and other physicians because these values determine the rate at which Medicare and other payers reimburse for procedures.

### What if I have a question?

Contact: ***{Include Specialty Society Contact}***

### How is This Surveyed Organized?

Each new/revised code must be surveyed (i.e., **there is one questionnaire per code**), so you may have several questionnaires to complete. Each questionnaire is organized the same and is comprised of questions relating to physician work.

|                   |
|-------------------|
| <b>START HERE</b> |
|-------------------|

**The following information must be provided by the physician responsible for completing the questionnaire.**

Physician Name: \_\_\_\_\_

Business Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Business Phone: (\_\_\_\_) \_\_\_\_\_

Business Fax: (\_\_\_\_) \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Physician Specialty: \_\_\_\_\_

Years Practicing Specialty: \_\_\_\_\_

Primary Geographic Practice Setting: Rural\_\_\_\_ Suburban\_\_\_\_ Urban\_\_\_\_

Primary Type of Practice: Solo Practice\_\_\_\_

Single Specialty Group\_\_\_\_

Multispecialty Group\_\_\_\_

Medical School Faculty Practice Plan\_\_\_\_

## PHYSICIAN WORK

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### INTRODUCTION

"Physician work" includes the following elements:

- Physician time it takes to perform the service
- Physician mental effort and judgment
- Physician technical skill and physical effort, and
- Physician psychological stress that occurs when an adverse outcome has serious consequences

**All of these elements will be explained in greater detail as you complete this survey.**

"Physician work" does **not** include the services provided by support staff who are employed by your practice and cannot bill separately, including registered nurses, licensed practical nurses, medical secretaries, receptionists, and technicians; these services are included in the practice cost relative values, a different component of the RBRVS.

### ***Background for Question 1***

Attached is a list Reference Services that have been selected for use as comparison services for this survey because their relative values are sufficiently accurate and stable to compare with other services. The “2000 Work RVU” column presents current Medicare RBRVS work RVUs (relative value units). Select one code which is most similar to the new/revised CPT code descriptor and typical patient/service described on the cover of this questionnaire.

**It is very important to consider the global period when you are comparing the new/revised code to the reference services.** A service paid on a global basis includes:

- visits and other physician services provided within 24 hours prior to the service;
- provision of the service; and
- visits and other physician services for a specified number of days after the service is provided.

The global periods listed on the cover of the survey refer to the number of post-service days of care that are included in the payment for the service as determined by the Health Care Financing Administration for Medicare payment purposes.

#### **Categories of *Global Period*:**

**090** 90 days of post-service care are included in the work RVU

**010** 10 days of post-service care are included in the work RVU

**000** 0 days of post-service care are included in the work RVU

**ZZZ** This code is reported in addition to a primary procedure and only the additional intra-service work to perform this service is included in the work RVU

**XXX** A global period does not apply to the code and evaluation and management and other diagnostic tests or minor services performed, may be reported separately on the same day

**QUESTION 1: Which of the Reference Services on the attached list is most similar to the new/revised CPT Code Descriptor and Typical Patient Service described on the cover of this questionnaire?**

**CPT Code**

## ***EVALUATION AND MANAGEMENT SERVICES***

### ***OFFICE***

#### **PRE-SERVICE PERIOD**

The pre-service period includes services provided before the service and may include preparing to see the patient, reviewing records, and communicating with other professionals.

#### **INTRA-SERVICE PERIOD**

The intra-service period includes the services provided while you are with the patient and/or family. This includes the time in which the physician obtains the history, performs an evaluation, and counsels the patient.

#### **POST-SERVICE PERIOD**

The post-service period includes services provided after the service and may include arranging for further services, reviewing results of studies, and communicating further with the patient, family, and other professionals which includes written and telephone reports.

## ***HOSPITAL***

#### **PRE-SERVICE PERIOD**

The pre-service period includes services that are **not performed on the patient's hospital unit or floor**, including: communications with other professionals and the patient's family; obtaining and/or reviewing the results of diagnostic and other studies; and written and telephone reports.

**INTRA-SERVICE PERIOD**

The intra-service period includes the services provided while you are present on the patient's hospital unit or floor, including: reviewing the patient's chart; seeing the patient, writing notes, and communicating with other professionals and the patient's family.

**POST-SERVICE PERIOD**

The post-service period includes services that are not provided on the patient's hospital unit or floor, including: communicating further with other professionals and the patient's family; obtaining and/or reviewing the results of diagnostic and other studies; and written and telephone reports.

## ***EMERGENCY MEDICINE***

For these services, the service period is treated as a whole and includes the work from the time you initially review the patient's records until you complete their chart.

### ***Invasive Services***

The work for the total service period may include:

- reviewing records, and interpreting test results or x-rays, and preparing to perform the service
- performing the service
- providing immediate post-procedural care before the patient is discharged or admitted to the hospital
- communicating with the patient, patient's family, and/or other professionals
- completing charts

***Evaluation and Management Services***

The work for the total service period may include:

- reviewing records, and interpreting test results or x-rays, and preparing to perform the service
- performing the service
- communicating with the patient, patient's family, and/or other professionals
- completing charts

***LABORATORY / IMAGING /  
OTHER MEDICAL SERVICES***

For these services, the service period is treated as a whole and includes the work from the time you begin the service until you complete it and report your results, if applicable. Consider only the work that you do and not the work done by technicians or other professionals. Do not include distinct evaluation and management services provided in addition to the service you are rating.

***Specialty Society Descriptions:***

**QUESTION 2:** How much of your own time is required per patient treated for each of the following steps in patient care related to this procedure? Indicate your time for the new/revised code on the front cover. (**Refer to definitions**)

### NEW/REVISED CODE

#### Day of Procedure

Pre-service time: \_\_\_\_\_ minutes

Intra-service time: \_\_\_\_\_ minutes

Post-service time \_\_\_\_\_ minutes

**QUESTION 3:** For the New/Revised CPT code and for the reference service you chose, rate the **AVERAGE** pre-, intra-, and post service *complexity/intensity* on a scale of 1 to 5 (circle one: 1 = low; 3 medium 5 = high). Please base your rankings on the universe of codes your specialty performs.

|               | New/Revised<br>CPT: | Reference Service<br>CPT: |
|---------------|---------------------|---------------------------|
| PRE-service   | 1 2 3 4 5           | 1 2 3 4 5                 |
| INTRA-service | 1 2 3 4 5           | 1 2 3 4 5                 |
| POST-service  | 1 2 3 4 5           | 1 2 3 4 5                 |

### ***Background for Question 4***

In evaluating the work of a service, it is helpful to identify and think about each of the components of a particular service. Focus only on the work that **you** perform during each of the identified components. The descriptions below are general in nature. Within the broad outlines presented, please think about the specific services that you provide.

**Physician work** includes the following:

**Time** it takes to perform the service.

**Mental Effort and Judgment** necessary with respect to the amount of clinical data that needs to be considered, the fund of knowledge required, the range of possible decisions, the number of factors considered in making a decision, and the degree of complexity of the interaction of these factors.

**Technical Skill** required with respect to knowledge, training and actual experience necessary to perform the service.

**Physical Effort** can be compared by dividing services into tasks and making the direct comparison of tasks. In making the comparison, it is necessary to show that the differences in physical effort are not reflected accurately by differences in the time involved; if they are, considerations of physical effort amount to double counting of physician work in the service.

**Psychological Stress** – Two kinds of psychological stress are usually associated with physician work. The first is the pressure involved when the outcome is heavily dependent upon skill and judgment and an adverse outcome has serious consequences. The second is related to unpleasant conditions connected with the work that are not affected by skill or judgment. These circumstances would include situations with high rates of mortality or morbidity regardless of the physician's skill or judgment, difficult patients or families, or physician physical discomfort. Of the two forms of stress, only the former is fully accepted as an aspect of work; many consider the latter to be a highly variable function of physician personality.

**QUESTION 4: For the New/Revised CPT code and for the reference service you chose, rate the intensity for each component listed on a scale of 1 to 5. (circle one: 1= low; 3 medium 5 = high). Please base your rankings on the universe of codes your specialty performs.**

| <b>Mental Effort and Judgment</b>   | <b>New/Revised<br/>CPT:</b> | <b>Ref. Service<br/>CPT:</b> |
|---|-----------------------------|------------------------------|
| The range of possible diagnoses and/or management options that must be considered                             | 1 2 3 4 5                   | 1 2 3 4 5                    |
| The amount and/or complexity of medical records, diagnostic tests, or other information that must be analyzed | 1 2 3 4 5                   | 1 2 3 4 5                    |
| Urgency of medical decision making  | 1 2 3 4 5                   | 1 2 3 4 5                    |
| <b>Technical Skill/Physical Effort</b>  |                             |                              |
| Technical skill required  | 1 2 3 4 5                   | 1 2 3 4 5                    |
| Physical effort required  | 1 2 3 4 5                   | 1 2 3 4 5                    |
| <b>Psychological Stress</b>   |                             |                              |
| The risk of significant complications, morbidity and/or mortality   | 1 2 3 4 5                   | 1 2 3 4 5                    |
| Outcome depends on skill and judgment of physician  | 1 2 3 4 5                   | 1 2 3 4 5                    |
| Estimated risk of malpractice suit with poor outcome  | 1 2 3 4 5                   | 1 2 3 4 5                    |

**QUESTION 5: How many times have you personally performed these procedures in the past year?**  
**New/Revised Code: \_\_\_\_\_ Reference Service Code: \_\_\_\_\_**

QUESTION 6: Is your typical patient for this procedure similar to the typical patient described on the cover?

Yes ☐

No ☐

If no, please describe your typical patient for this procedure:

---

\*\*\*\*\*VERY IMPORTANT\*\*\*\*\*

**QUESTION 7: Based on your review of all previous steps, please provide your**

**Estimate work RVU for the new/revised CPT code:**

For example, if the new/revised code involves the same amount of physician work as the reference service you choose, you would assign the same work RVU. If the new/revised code involves twice as much (or half as much) work as the reference service, you would calculate and assign a work RVU value that is twice as much (or half as much) as the work RVU of the reference service. This methodology attempts to set the work RVU of the new or revised service "relative" to the work RVU of comparable and established reference services.

# Appendix B

## Technical Advisory Panel Materials

August 21, 2001

«Concotenate»

«Address»

«Address\_2»

Dear Dr. «Last»,

The California Department of Industrial Relations / Industrial Medical Council (DIR/IMC) has contracted with The Lewin Group to determine the relative work value of Evaluation and Management (E/M) codes in the workers' compensation system as compared to other practice settings. California uses the *Workers' Compensation Official Medical Fee Schedule* (OMFS) to establish maximum fees for medical services provided to individuals receiving workers' compensation benefits. The purpose of this project is to determine whether the physician work component in the E/M CPT service category of the OMFS adequately reflects the resources used in providing services to injured workers. The stimulus for this project is California's proposal to adopt a resource-based relative value scale for its *Official Medical Fee Schedule*.

In order to determine the adequacy of the current relative work value of E/M services in the OMFS, The Lewin Group is assembling a Technical Advisory Panel (TAP). The purpose of the TAP is to guide the Lewin Project Team in a number of activities throughout the process of evaluating the E/M codes, such as developing a sampling frame of potential survey participants and developing clinical vignettes. The TAP will be comprised of 12-15 physicians whose practices are devoted primarily to treating injured workers in the workers' compensation system. We are contacting members of the Industrial Medical Council to identify candidates for the TAP. We ask that candidates have expertise in physician payment issues and work in more than one payment system (for example, have experience working with workers' compensation and group health or Medicare payment systems).

The TAP will include a clinician from each of the eight workers' compensation physician groups designated in the Labor Code and representatives of medical specialties that have diverse approaches to delivering E/M services. The remaining 4-6 medical specialists will be selected to add depth to TAP deliberations, rather than to reflect the volume of services delivered by the various physician groups within the workers' compensation system. To the extent

possible, members of the TAP will be chosen from different geographic areas within the state.

Membership in the TAP will require a substantial time commitment. We ask that Council members nominate candidates who have a proven track record of working in teams, using a group consensus process, and / or serving on a Technical Advisory Panel. We plan to conduct an initial two-day meeting of the Panel on September 21<sup>st</sup> and 22<sup>nd</sup>, 2001 in San Francisco, California, followed by one or more two-day meetings over the next four to six months. Other activities that members of the TAP will be asked to undertake include a series of monthly teleconferences, as well as several ad hoc telephone consultations as the need arises. Additionally, materials that are developed for the project will require Panel review.

We sincerely hope that you will be able to submit the names of up to three nominees to serve on the TAP in the appropriate specialty(ies) listed in the enclosed Scope of Work for the TAP. We believe that physician participation is essential to ensure a successful determination of the physician work component of Evaluation and Management codes for workers' compensation. We will call you in a few days to follow-up on this letter.

We have appended a form that sets out some of the particular qualifications that would make a candidate a valuable contributor to this process. Kindly return a completed form for each of your candidates. We would also welcome a copy of a candidate's curriculum vitae. If you have any questions in the meantime, please feel free to call me or Jawaria Gilani at (703) 269-5500.

Sincerely,

Joan DaVanzo, Ph.D., M.S.W.  
Vice President

Enclosures: Project Description  
Scope of Work for the TAP  
Form for Candidates

# **A Study of the Relative Work Content of Evaluation and Management Codes**

## ***Project Description***

The *Workers' Compensation Official Medical Fee Schedule* (OMFS) is used to determine reimbursement rates for California's workers' compensation system. The OMFS establishes maximum fees for medical services provided by physician and non-physician health care providers to individuals receiving workers' compensation benefits. The purpose of this project is to determine whether the physician work component in the Evaluation and Management (E/M) CPT service category adequately reflects the resources used in providing services to injured workers. The project is sponsored by the California Department of Industrial Relations/ Industrial Medical Council (DIR/IMC) and uses an approach similar to that of the American Medical Association Resource-Based Relative Value Scale Update Committee (RUC).

Both qualitative and quantitative methods are being used to examine the extent to which additional skill, time, and judgment are needed in providing E/M services to injured workers. Physicians treating injured workers may be responsible for determining work restrictions, evaluating psychosocial issues that are unique to individuals receiving workers' compensation, reviewing job analyses, and educating workers and employers about early return to work. These activities may be complements to or substitutes for work performed by physicians during the provision of E/M services outside of the workers' compensation setting. The project will establish different physician work values for the different activities related to E/M services in workers' compensation as they vary in intensity in terms of time, technical skill, and mental effort and judgment relative to values underlying the Medicare Fee Schedule.

Project activities include (1) the development of reference codes and clinical vignettes which reflect a typical patient for the specific codes, (2) a by-mail survey of treating physicians, (3) two in-person proctored survey sessions at which participating physicians will complete the survey, one in Northern California and one in Southern California, and (4) data analysis and validation using the American Medical Association RVS Update Process.

An important component of the project is the work of a Technical Advisory Panel (TAP) comprised of 12-15 individuals from different clinical specialties with expertise in physician payment issues. It is imperative that the TAP include treating physicians who represent **diverse** ways of handling E/M services and who practice in workers' compensation and other settings. The purpose of the TAP is to guide the Project Team in a number of activities throughout the process, such as developing a sampling frame of potential survey participants and developing clinical vignettes.

The project is expected to run from September 2001 through February 2002.

## ***A Study of the Relative Work Content of Evaluation and Management Codes***

### **Scope of Work for the Technical Advisory Panel**

Having major stakeholders participate in a project at each stage of the process is essential to its success. The purpose of this project sponsored by the California Department of Industrial Relations/Industrial Medical Council (DIR/IMC) is to determine the relative work content of Evaluation and Management (E/M) codes in the workers' compensation system as compared to other practice settings. In meeting this objective, the project will examine the extent to which additional skill, time, and judgment are needed in providing E/M services to injured workers. Physicians treating injured workers may be responsible for determining work restrictions, evaluating psychosocial issues that are unique to workers' compensation, reviewing job analyses, and educating workers and employers about early return to work. These activities may be complements to or substitutes for work performed by physicians during the provision of E/M services outside of the workers' compensation setting. Project methodology is a modified American Medical Association Resource-Based Relative Value Scale Update Committee (RUC) approach. The purpose of the Technical Advisory Panel is to guide the Project Team in a number of activities throughout the course of the project, including developing a sampling frame for participating providers as well as assisting the Project Team in developing reference codes (i.e., comparison codes) and clinical vignettes (i.e., brief patient descriptions for each code).

It is essential to the project that the Technical Advisory Panel be comprised of 12-15 physicians who treat injured workers in the workers' compensation system. Candidates for the Panel must have expertise in physician payment issues and should be practicing in more than one payment system (workers' compensation and group health or Medicare). The Advisory Panel will include a clinician from each of the eight workers' compensation physician groups designated in the Labor Code and representatives of medical specialties that have diverse approaches to delivering E/M services. Medical specialists will be selected to add depth to Panel deliberations rather than to reflect the volume of services delivered by the various physician groups within the workers' compensation system. Physician specialty groups include acupuncture, chiropractic, dentistry, optometry, osteopathy, podiatry, psychology, emergency medicine, neurology, neurosurgery, occupational medicine, orthopedic surgery, physical medicine and rehabilitation, and psychiatry. To the extent possible, members of the Panel will be chosen from different geographic areas within the state.

Membership in the Technical Advisory Panel for this project will require a substantial time commitment between September of 2001 and February 2002. We plan to conduct an initial two-day meeting of the Panel early in the project, followed by a series of monthly teleconferences, as well as several ad hoc telephone consultations, as the need arises. Additionally, materials that are developed for the project will require Panel review.

***A Study of the Relative Work Content of  
Evaluation and Management Codes***

***Information Form for Candidates***

Professional degree:

California license #:

Professional training:

Years of experience:

Employer and Type of Practice: (e.g., HMO, etc)

Hours per week in medical practice:\_\_\_\_\_

    % practice in direct medical treatment:\_\_\_\_\_

        % CA workers' compensation:\_\_\_\_\_

        Non-workers' comp:

            % Medicare:\_\_\_\_\_

            % MediCal:\_\_\_\_\_

            % Private health\_\_\_\_\_

            % Other (specify)\_\_\_\_\_

Previous work on technical advisory panels or in group consensus process?:

Expertise in physician payment issues?:

For MD/DO:

1. Specialty(ies):\_\_\_\_\_

    If Board certified, name of Board:\_\_\_\_\_

2. Subspecialty(ies):

    If certified, name of Board:\_\_\_\_\_

# Appendix C

## Technical Advisory Panel Membership

## TAP Members

| <b>Name</b>     | <b>Degree</b> | <b>Specialty</b>     |
|-----------------|---------------|----------------------|
| Robert Wright   | Lac           | Acupuncture          |
| Rebecca Patchin | MD            | Anesthesiology       |
| Craig Gunderson | DC            | Chiropractic         |
| Kent Takemoto   | MD            | Internal Medicine    |
| Philipp Lippe   | MD            | Neurological Surgery |
| Robert Merdith  | MD            | Neurological Surgery |
| Linda Marden    | MD            | Neurology            |
| Peter Col       | OD            | Optometry            |
| Michael Smith   | MD            | Orthopedic Surgery   |
| Donald Lee      | DO            | Osteopathy           |
| Robert Flint    | PhD           | Psychology           |
| Tony Poggio     | DPM           | Podiatry             |
| Thomas Preston  | MD            | Psychiatry           |

# Appendix D

Technical Advisory  
Panel Presentation:  
9/21/2001-9/22/2001

---

**Developing a Survey of the Relative Physician Work  
Content of Evaluation and Management Codes for  
Injured Workers in the State of California**

*Conducted by:*  
**Technical Advisory Panel**

*Facilitated by:*  
**Al Dobson  
Joan DaVanzo  
Jawaria Gilani**

September 21 and 22, 2001



# Overview

---

- Introduction
- Purpose of the Study
- Plan of Action
  - Survey Instrument - review for purpose and clarity
  - E&M Codes:
    - select representative E&M codes for survey
    - develop representative patient descriptions (vignettes)
    - select reference services
  - Survey Process and Physician Sample Structure
  - Analytic Plan



Summary and Wrap Up

---

The LEWIN GROUP

2

# Introduction

---

- The *Workers' Compensation Official Medical Fee Schedule* (OMFS) currently sets reimbursement rates for medical services paid for in the California workers' compensation system.
  - Relative value units in the OMFS are currently based on historic charges.

## Introduction (...continued)

---

- The State of California proposes adapting the resource-based relative value scale (RBRVS) used in the Medicare Fee Schedule (MFS).
- Relative values for services in the RBRVS are based on resource costs (physician work, practice expenses and malpractice) adjusted for geographic cost differences.

## Purpose of the Study

---

- To determine whether the physician work required for E&M services provided to injured workers is less than, greater than or comparable to patients in other settings as reflected in the MFS relative values.
- To interpret the consistency and magnitude of the study results across the universe of E&M codes.
- To identify factors that contribute to any differences between work provided to injured workers as compared to other patients.

## Ground Rules

---

Technical Advisory Panel members should view their role as providing technical advice in the development of the survey. This implies that no individual serves as an advocate for any specialty or other group. Furthermore, TAP members were also selected for their skills in working as part of a group.

## Plan of Action

---

- Day 1:
  - Review the proposed survey instrument for clarity and structure.
  - Select the representative sample of E&M codes to be included in the survey.
  - Develop the vignettes (typical injured worker patient descriptions) for the E&M codes to be surveyed (Breakout groups).

## Plan of Action (...continued)

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- Day 2:
  - Develop the vignettes (continued).
  - Identify reference codes (Breakout groups).
  - Discuss the survey process.
    - Proctored Survey
    - Mail Survey
  - Determine the physician sample structure.
  - Review the RUC-based analytic plan.
  - Review and finalize meeting results and determine level of consensus.

# The Physician Work Component

---

- Factors include:
  - Time to perform service
  - Technical skill and physical effort
  - Mental effort and judgement
  - Psychological stress
- Physician work accounts for ~54% of the total relative value for each service.



# Definitions

---

**Time to perform service - divided into:**

- **Pre-Service time**

- Office: preparing to see patient; reviewing records; communicating with other professionals and/or family
- Inpatient: obtaining/reviewing diagnostics and chart; reports; communicating with others

- **Intra-Service time**

- obtaining a history; doing an evaluation; counseling; writing notes

- **Post-Service time**

- arranging for further services; reviewing results; documentation; reports; communicating with other professionals and/or family



## Definitions (...continued)

---

- **Mental Effort and Judgement:**

- describes the amount of clinical data that needs to be considered, the knowledge required, the range of possible decisions, the number of factors to be considered in making a decision and the degree of complexity of the interaction of these factors

## Definitions (...continued)

---

- **Technical skill:**

- describes the knowledge, training and actual experience necessary to perform the service

- **Physical effort:**

- can be compared by dividing services into tasks and making a direct comparison of the tasks. (Time differences should not be included.)

# Definitions

---

- **Psychological stress:**

- The pressure involved when the outcome is heavily dependent upon skill and judgement and an adverse outcome has serious consequences.

# Survey Instrument

---

## Context:

The relative values in the RBRVS were designed to reflect the relative physician work required for all types of patients e.g., Medicare, Group Health and patients in other settings.

## Survey Instrument (refer to Appendix A)

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- Cover Letter
- Instructions
- Definition of Terms
- Instrument
  - Step 1: Indicate initial work RVU based on references provided.
  - Step 2:
    - Estimate pre, intra and post-service times.
    - Estimate intensity based on given factors.
  - Step 3: Provide final estimate work RVU.

## Tasks for the Technical Advisory Panel

---

- Select up to 20 specific E&M codes to be surveyed (refer to Appendix B).
- Determine appropriate vignettes for each surveyed code (Breakout groups).
- Identify reference services (Breakout groups).

## E&M Codes

---

- The Medicare Fee Schedule contains 129 CPT E&M codes.
- Total of 114 CPT E&M codes published in the 2000 OMFS.
- 95 CPT E&M codes were included in the California Workers' Compensation Institute 2000 Claims File.
- 65 codes each represent at least 0.01% of total workers' compensation E&M Services.



The LEWIN GROUP

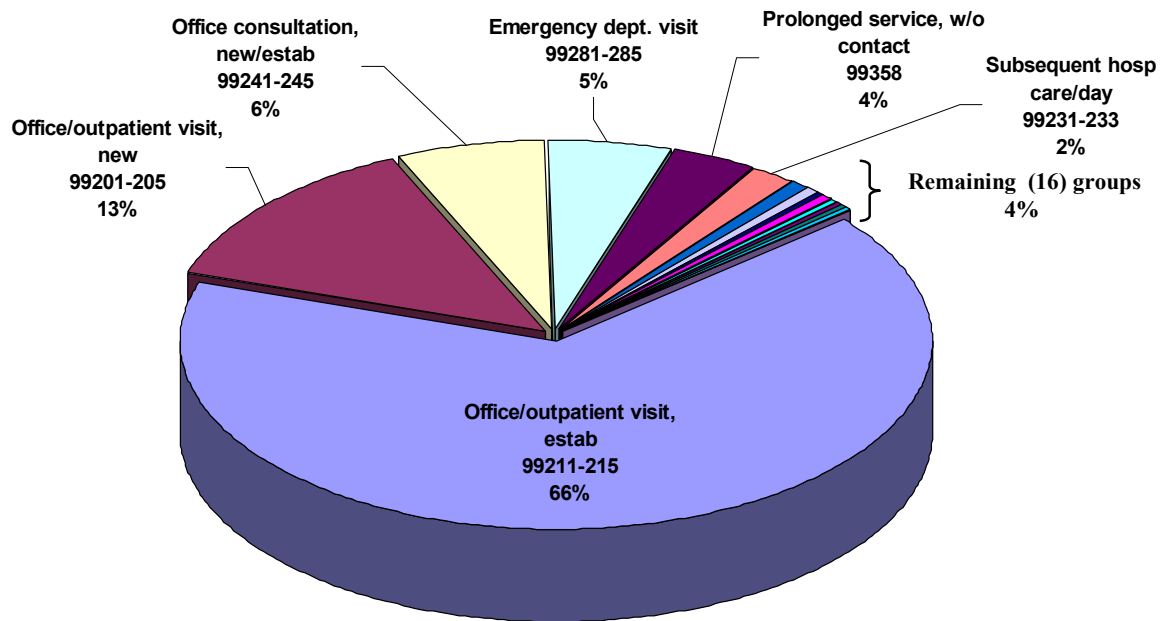
---

Total number of E&M claims filed = 559,233

17

## Code Groups as % of Total E&M Claims Filed

(from California Workers' Compensation File, 2000)



## Code Groups as % of Total E&M Claims Filed

(from California Workers' Compensation File, 2000)

| Group | CPT Range | Description                        | Frequency (%) |
|-------|-----------|------------------------------------|---------------|
| 1     | 99211-215 | Office/outpatient visit, estab     | 65.96         |
| 2     | 99201-205 | Office/outpatient visit, new       | 13.33         |
| 3     | 99241-245 | Office consultation, new/estab     | 6.31          |
| 4     | 99281-285 | Emergency dept visit               | 5.31          |
| 5     | 99358     | Prolonged service, w/o contact     | 3.82          |
| 6     | 99231-233 | Subsequent hospital care/day       | 1.92          |
| 7     | 99354-355 | Prolonged service, office          | 0.67          |
| 8     | 99371-373 | Physician phone consultation       | 0.58          |
| 9     | 99251-255 | Initial inpatient consult, new/est | 0.38          |
| 10    | 99361-362 | Physician/team conference          | 0.37          |

## Code Groups as % of Total E&M Claims Filed

(from California Workers' Compensation File, 2000)

| Group | CPT Range | Description                          | Frequency (%) |
|-------|-----------|--------------------------------------|---------------|
| 11    | 99351-353 | Home visit, estab patient            | 0.24          |
| 12    | 99221-223 | Initial hospital care/day            | 0.21          |
| 13    | 99272-275 | Confirmatory consultation, new/estab | 0.20          |
| 14    | 99238-239 | Hospital discharge day               | 0.15          |
| 15    | 99291-292 | Critical care                        | 0.11          |
| 16    | 99311-313 | Nursing fac care, subseq             | 0.11          |
| 17    | 99261-263 | Follow-up inpatient consult, estab   | 0.10          |
| 18    | 99356-357 | Prolonged service, inpatient         | 0.03          |
| 19    | 99218-219 | Initial observation care/day         | 0.02          |
| 20    | 99341-343 | Home visit, new patient              | 0.02          |
| 21    | 99217     | Observation care discharge day mgt   | 0.01          |
| 22    | 99288     | Direct advanced life support         | 0.01          |
| 23    | 99375     | Home health care supervision         | 0.01          |

## Sample Selection

---

- Select up to 20 E&M codes reflecting broad range of E&M services provided to injured workers.
- See Appendix B containing the frequencies for each of the 65 E&M codes > 0.01%.

## Vignette Selection

---

- A vignette portrays a typical patient for the specific code being surveyed.
- A vignette reflects services provided to typical injured worker.
- Refer to Appendix C containing selected clinical descriptions taken from the CPT Code Manual 2000.
- We will use these clinical descriptions as a basis for vignette development. If a sampled code has no relevant clinical description in the CPT manual, we will develop one.
- Breakout groups to develop vignettes.

## Reference Services

---

- Reference codes serve as comparison services for the sampled E&M codes.
- Multiple reference codes will provide context for the determination of work values for the surveyed E&M codes.
- As a starting point, we will use the E&M codes with proximate time values (above and below) to the sampled E&M codes.

## Reference Services (...continued)

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- The relative work values of the reference codes in the Medicare Fee Schedule RBRVS provide a point of departure for the determination of work values for the sampled codes.
- The RBRVS relative values were designed to reflect the relative work values for all patient populations.
- Refer to Appendix D.
- Breakout groups to identify reference services.

# Survey Process

---

## 1) Proctored Survey

- Two in-person proctored surveys involving 20-25 physicians each (North/South)
- Will enable clarification/ revision of unclear questions/statements in survey instrument

## 2) Mail Survey

## 3) Data Entry and Analysis

## Physician Sample Structure

---

- Selection of physicians providing direct care to injured workers and other patients.
- Suggested groupings:
  - by geographic location
  - by specialty

## Analytic Plan

---

- Summarize response rate (by CPT) [Example]

| CPT   | Response Rate (%) |
|-------|-------------------|
| 99201 | xx.xx             |
| 99203 | xx.xx             |

- Summarize extent (%) to which vignettes reflect typical patient for the code being surveyed [Example]

| CPT   | Typical (%) | Not Typical (%) | No Response (%) |
|-------|-------------|-----------------|-----------------|
| 99201 | xx.xx       | xx.xx           | xx.xx           |
| 99203 | xx.xx       | xx.xx           | xx.xx           |

## Analytic Plan (...continued)

---

- Report calculated median work RVU vs. Medicare.

[Example]

| CPT   | Medicare<br>Work RVU | Median<br>Work RVU<br>(from survey) |
|-------|----------------------|-------------------------------------|
| 99201 | x.xx                 | x.xx                                |
| 99203 | x.xx                 | x.xx                                |

## Analytic Plan (...continued)

---

- Report RUC statistics for survey variables.
  - Indicate minimum values, 25th, 50th and 75th percentiles and maximum values for all surveyed codes.
  - Classified by:
    - » Pre, Intra and Post-service Time
    - » Mental Effort, Technical Skill, Psychological Stress
- Analyze survey statistics for differences.

---

## Summary

## Questions and Answers

# Appendix E

## Physician Work Survey Instrument

**See Attachment for Physician  
Work Survey Instrument**

# Appendix F

In-Person Survey  
Session Meeting  
Presentation:  
12/14/2001-12/15/2001

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# **A Survey of the Relative Physician Work Content of Evaluation and Management Codes for Injured Workers in the State of California**

*Facilitated by:*

**Allen Dobson, PhD**

**Joan DaVanzo, PhD**

**Jawaria Gilani**

December 14, 2001

Los Angeles, California

December 15, 2001

San Francisco, California

# Overview of Meeting

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- Ground Rules
- Introduction
- Physician Work in Evaluation and Management Services
- Technical Advisory Panel Activities
- Survey Instrument
- Survey Process
- Complete Survey Instrument
- Supplemental Survey
- Question and Answer Session

## Ground Rules

---

- During this meeting, we will focus on the survey process and completing the survey instrument.
- After you have collectively completed the survey instrument and turned in your work we will provide a brief supplemental survey to determine the rationale for your answers.

# Introduction

---

- The *Workers' Compensation Official Medical Fee Schedule* (OMFS) currently sets reimbursement rates for medical services paid for in the California workers' compensation system.
  - Relative value units in the OMFS are currently based on historic charges.

## Introduction (cont.)

---

- The State of California proposes adapting the resource-based relative value scale (RBRVS) used in the Medicare Fee Schedule (MFS).
- Relative values for services in the Medicare RBRVS are based on resource costs (physician work, practice expenses and malpractice) adjusted for geographic cost differences.
- Medicare Allowed Amount =

$$\text{Conversion Factor } X [(RVU \text{ work} \times GPCI_{\text{work}}) + (RVU \text{ practice expense} \times GPCI_{\text{pe}}) + (RVU \text{ malpractice} \times GPCI_{\text{mp}})]$$

# Introduction (cont.)

---

## Purpose of Survey Instrument:

- To determine whether the *physician work* required for evaluation and management (E/M) services provided to injured workers is less than, greater than or comparable to patients in other settings as reflected in the MFS relative values.
- Definition of Evaluation and Management: Visits and consultation services rendered to patients. "These include examinations, evaluations, treatments, conferences with or concerning patients, preventive supervision and similar medical services. The different levels of E/M services recognize 7 components (history; examination; medical decision making; counseling; coordination of care; nature of presenting problem and time) and they encompass the wide variations in skill, effort, time, responsibility and medical knowledge required for the prevention or diagnosis and treatment of illness or injury and the promotion of optimal health. " (AMA CPT Manual, 2001)
- Why E/M Services? The Industrial Medical Council chose to study the E/M codes because they believe those are the codes for which the work and practice expenses for injured workers are most likely to differ from patients in other settings. This survey will determine the nature of the perceived difference.

# Physician Work in E/M Services

---

- Physician work includes the following elements:
  - Physician time it takes to perform the service
  - Physician mental effort and judgement
  - Physician technical skill and physical effort
  - Physician psychological stress that occurs when an adverse outcome has serious consequences

(AMA/Specialty Society RVS Update Committee)
- Physician work accounts for ~54% of the total relative value for each service.

## Technical Advisory Panel (TAP) Activities

---

- In late September, The Lewin Group convened a TAP made up of physicians whose practices were devoted primarily to treating injured workers in the workers' compensation system.
- The TAP assisted in the developed of a survey to evaluate the physician work in E/M codes by:
  - selecting a representative sample of 20 E/M codes to be surveyed
  - developing vignettes (typical injured worker patient descriptions) for the surveyed E/M codes
  - identifying reference codes for the 20 surveyed E/M codes

# Survey Instrument

---

- Background Information on Respondent
- Step 1: Physician Work Component Valuation
- Step 2: Initial Physician Work Magnitude Estimation
- Step 3: Final Physician Work Magnitude Estimation
- ***When you evaluate the work required in providing services to an injured worker, you should assume that the claim has been accepted. For all reference services, you should assume that the service is not for a workers' compensation patient. Services billed under the Medical-Legal Fee Schedule are not included in the survey.***



## Survey Instrument (cont.)

---

### **Step 1: Physician Work Component Valuation**

- The survey participant determines the extent to which the actual work involved in providing a specific service under an E/M CPT code to injured workers differs from that of providing this service under the same E/M CPT code to other types of patients. This is done by providing estimates of pre-, intra- and post service time and rating the complexity and/or intensity of each of the components of physician work for both injured workers and for non-workers' compensation patients for the surveyed code.

**Time** to perform service is divided into:

- **Pre-Service time**
  - Office: preparing to see patient; reviewing records; communicating with other professionals and/or family
  - Hospital: obtaining/reviewing diagnostics and chart; reports; communicating with others



## Survey Instrument (cont.)

---

- **Intra-Service time**

- Office: obtaining a history; doing an evaluation; counseling
- Hospital: reviewing the patient's chart; seeing the patient, writing notes, and communicating with other professionals and the patient's family

- **Post-Service time**

- Office: arranging for further services; reviewing results; documentation; reports; communicating with other professionals and/or family
- Hospital: communicating with other professionals and the patient's family; obtaining or reviewing results of studies, written and telephone reports

## Survey Instrument (cont.)

---

### **Mental Effort and Judgement:**

- describes the amount of clinical data that needs to be considered, the knowledge required, the range of possible decisions, the number of factors to be considered in making a decision and the degree of complexity of the interaction of these factors

### **Technical skill:**

- describes the knowledge, training and actual experience necessary to perform the service

## Survey Instrument (cont.)

---

### **Physical effort:**

- can be compared by dividing services into tasks and making a direct comparison of the tasks. (Time differences should not be included.)

### **Psychological stress:**

- The pressure involved when the outcome is heavily dependent upon skill and judgement and an adverse outcome has serious consequences.

## Survey Instrument (cont.)

---

### **Step 2: Initial Physician Work Magnitude Estimation**

- Based on your ratings of the intensity and/or complexity of the different components of physician work, you provide an initial estimate of the physician work RVU for the E/M CPT code being surveyed as applied to injured workers in relation to the work RVU for the identical E/M CPT code in the treatment of non-workers' compensation patients.

## Survey Instrument (cont.)

---

### **Step 3: Final Physician Work Magnitude Estimation**

- In order to fine tune your RVU estimate, we next ask you to plot your initial RVU estimate on a scaling “thermometer” which reflects a family of E/M CPT codes (and their corresponding physician work RVUs) as applied to non-workers’ compensation patients.

## Survey Instrument (cont.)

---

- After you have plotted your initial work RVU, we will ask you to “re-assess” whether the work RVU value you initially provided reflects your final estimate of the code being surveyed as it compares with the rest of the family of CPT codes under the non-workers’ compensation program.
- Repeat Steps 1 - 3 for the remaining 19 codes to be surveyed.

# Survey Process

---

## 1) Pilot Survey

- Two in-person proctored surveys involving physicians (North/South)

## 2) Mail Survey to increase sample size and individual. specialty group representation

## 3) Data Entry and Analysis

---

## Questions and Answers

# Appendix G

## Industrial Medical Council

### Presentation–The Relative Work Content of E&M Codes: 7/18/2002

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## **The Relative Work Content of Evaluation and Management Codes: The Physician Work Study**

*Prepared by:*

Allen Dobson, PhD  
Joan DaVanzo, PhD, MSW  
Jawaria Gilani, MPH  
Maria Consunji, MD, MHS  
Lane Koenig, PhD

*Prepared for :*

The California Department of Industrial Relations  
The Industrial Medical Council

July 18, 2002

## Physician Work Study

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### Presentation Outline

- ◆ Study Context
- ◆ Objective of Physician Work Study
- ◆ Physician Work Measurement
- ◆ Methodology
- ◆ Results
- ◆ Discussion

## Study Context

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**The Physician Work Study is part of a larger effort to revise the Department of Industrial Relations' Official Medical Fee Schedule, which is used to set payment rates for services provided to workers' compensation patients**

- RBRVS Study
- Physician Work Study
- Practice Expense Study

## Objective

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**To determine whether the physician work required when providing evaluation and management (E/M) services to workers' compensation patients is less than, greater than, or comparable to the physician work required when providing E/M services to patients in other settings in California.**

## Physician Work Measurement

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- ◆ As the then Health Care Financing Administration (HCFA) considered moving to a resource-based relative value approach to determine fees for physician services in the mid 1980s, a methodology of gauging relative physician work across various medical services was required
- ◆ Harvard researchers adapted an order of magnitude estimation approach to measure physician work
  - Magnitude estimation is a method to obtain assessments of physician work and its dimensions. With this method, survey participants estimate the amount of physician work required to perform a particular service by comparing it to the work required for a set of reference services and other relevant information.

## Physician Work Measurement (cont.)

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- ◆ HCFA implemented the Resource Based Relative Value System (RBRVS) in 1992
  - In the RBRVS, payments for medical services are based on relative value units (RVUs) that reflect the relative resource costs required to perform a service
  - Each medical service that is reimbursed has three RVUs assigned to it: physician work (54%), practice expense (41%) and malpractice (5%)
  - HCFA proposed RVU values for use in all payment settings.
- ◆ *“This approach is desirable because a resource cost basis would reflect what relative values would be under a hypothetical market that functions perfectly.” (Physician Payment Review Commission, 1987)*

## Physician Work Measurement (cont.)

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- ◆ American Medical Association's RVS Update Committee (RUC)
  - RUC has adapted an order of magnitude estimation approach for measuring physician work
  - The RUC approach is the accepted standard methodology for relative value determination and is accepted by numerous groups
  - RUC approach:
    - survey based
    - recommended sample size of 30 respondents
    - standard set of definitions for physician work components
    - standard analytic requirements

## Physician Work Measurement (cont.)

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- ◆ Prior Lewin Group Physician Work studies utilized order of magnitude estimation
  - Psychotherapy codes
  - Radiation oncology codes
  - Cardiology codes (four sets)
- ◆ In the Physician Work Study, The Lewin Group followed the RUC approach

## Physician Work Measurement (cont.)

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- ◆ Reliability

- The ability of different physician groups to produce the same results
  - Physician work estimates have been proven to be highly consistent from one group of physicians to another

- ◆ Validity

- "...the appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores..." (Pedhazur and Schmelkin, Measurement, Design and Analysis: An Integrated Approach, 1991)
- Physician judgments on relative work have been accepted as valid by both public and private policy makers

## Methodology: Study Activities

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## Methodology: Technical Advisory Panel

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- ◆ The Lewin Group received nominations for membership in the Technical Advisory Panel (TAP) from the IMC and various medical associations for representatives from the eight LC 3209.8 physician groups and appropriate medical specialties
  - TAP members were selected based on specialty and experience with both workers' compensation and non-workers' compensation patients
  - TAP members were asked to represent medicine as a whole and not their individual specialties
- ◆ TAP activities
  - Selected 20 E/M codes to include in the Physician Work Survey Instrument
    - 114 E/M codes in the 2000 Official Medical Fee Schedule
    - The 20 selected codes represented 87% of claims and 94% of total E/M payments contained in the CWCI file
  - Selected reference services and vignettes\* from the AMA CPT to accompany the 20 surveyed E/M codes
  - Reviewed final Physician Work Survey Instrument

\* A vignette represents a typical patient for a particular service.

## Survey Instrument

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- ◆ Survey Instrument was similar to RUC Protocol
  - Physicians were asked to estimate the amount of physician work (as reflected in an RVU) required to deliver a particular E/M service to a workers' compensation patient by comparing it to the physician work required to deliver the same E/M service to a non-workers' compensation patient
  - The reference RVUs (used for comparison purposes) were taken from the RBRVS
  - The RBRVS RVUs are utilized by many public and private payers

## Survey Instrument (cont.)

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***Key Instruction:***

The following services are coded and reimbursed separately from the E/M codes in the OMFS and should not be included in your responses:

- ◆ 99080 – Primary Treating Physician’s Permanent and Stationary Report; Report of Disability Status (RU 90) where employee is released to pre-injury occupation; Consultation reports
- ◆ 99081 – Primary Treating Physician’s Progress Report (PR2) when in accordance with 8 CCR section 9785; Primary Treating Physician’s Final Discharge Report
- ◆ 99048 – Telephone call with employer or appropriate agency in excess of 15 minutes
- ◆ 99086 – Reproduction of chart notes
- ◆ 99087 – Reproduction of duplicate reports

## Survey Instrument (cont.)

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In contrast, work associated with reports that are not separately reimbursable was included in physician work estimates:

- Doctor's First Report
- Treating Physician's Report of Disability Status (DWC Form RU-90) where the physician has not been able to give an opinion regarding the employee's ability to return to the pre-injury occupation
- Report by a secondary physician to the primary treating physician

## Survey Instrument (cont.)

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- Step 1: Physician Work component valuation\*
  - Time
  - Mental effort and judgment
  - Technical skill and physical effort
  - Psychological stress
- Step 2: Initial RVU magnitude estimation
  - Based on work component valuation for workers' compensation patients relative to non-workers' compensation patients
- Step 3: Final RVU magnitude estimation
  - Based on comparison of initial magnitude estimate values relative to selected RBRVS E/M reference code values within the same family

\* RUC definitions of these terms were provided in the survey instrument

## Data Collection Strategy

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- ◆ Two fold data acquisition strategy
  - In-person survey sessions in northern and southern California
    - Received nominations from the IMC and medical associations
    - Selected attendees based on experience with both workers' compensation and non-workers' compensation patients
    - Collected information on the physician activities that occur when evaluating workers' compensation patients
    - In-person sessions assured a minimal threshold number of responses to the survey
  - Mail Survey
    - Sent to a random sample of physicians based on lists of workers' compensation providers in California

## Analytic Methods

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- Plotted individual surveyed work estimates and calculated corresponding medians by code and for in-person and mail survey responses
- Compared median surveyed RVUs to RBRVS work RVUs for each of the 20 surveyed E/M codes
- Developed an approach to predict non-surveyed E/M code values
  - ⇒ Tested various regression approaches
  - ⇒ Compared surveyed and predicted work RVUs to RBRVS work RVUs
  - ⇒ Selected the median regression model approach which most closely matched median surveyed work values on a code by code basis
- Produced final work RVUs for all E/M codes based on the median regression approach
- Compared final work RVUs with actual surveyed work RVUs and RBRVS RVUs to further verify accuracy of approach
- Estimated the impact of the increased E/M work RVUs on total E/M payments

## Survey Respondents - *Practice Setting*

*Sample Size = 87    RUC recommends a sample of 30.*

| Type                    | Number    | Percentage of Total (%) |
|-------------------------|-----------|-------------------------|
| Solo                    | 43        | 49%                     |
| Single Specialty Group  | 28        | 32%                     |
| Multi specialty Group   | 12        | 14%                     |
| Academic Medical Center | 1         | 1%                      |
| Unknown                 | 3         | 3%                      |
| <b>TOTAL</b>            | <b>87</b> | <b>100%</b>             |

| Type         | Number    | Percentage of Total (%) |
|--------------|-----------|-------------------------|
| Rural        | 4         | 5%                      |
| Suburban     | 37        | 43%                     |
| Urban        | 43        | 49%                     |
| Unknown      | 3         | 3%                      |
| <b>TOTAL</b> | <b>87</b> | <b>100%</b>             |

## Survey Respondents – *Practice Characteristics*

|                | <i>Years in<br/>Specialty</i> | <i>Years in<br/>Workers'<br/>Comp</i> | <i>% Time Evaluating Patients</i> |                             |
|----------------|-------------------------------|---------------------------------------|-----------------------------------|-----------------------------|
|                |                               |                                       | <i>Workers Comp</i>               | <i>Non-Workers<br/>Comp</i> |
| <b>Mean</b>    | <b>20</b>                     | <b>16</b>                             | <b>52%</b>                        | <b>43%</b>                  |
| <b>Median</b>  | <b>19</b>                     | <b>15</b>                             | <b>50%</b>                        | <b>40%</b>                  |
| <b>Minimum</b> | <b>3</b>                      | <b>2</b>                              | <b>1%</b>                         | <b>0%</b>                   |
| <b>Maximum</b> | <b>42</b>                     | <b>42</b>                             | <b>100%</b>                       | <b>99%</b>                  |

## Survey Respondents - *Primary Type of Practice*

| Specialty                            | Number (N=87) | Percentage of Total (%) |
|--------------------------------------|---------------|-------------------------|
| Acupuncture                          | 4             | 5%                      |
| Anesthesiology                       | 1             | 1%                      |
| Chiropractic                         | 17            | 20%                     |
| Dental Medicine                      | 4             | 5%                      |
| Emergency Medicine                   | 2             | 2%                      |
| Neurology                            | 4             | 5%                      |
| Occupational Medicine                | 8             | 9%                      |
| Ophthalmology                        | 1             | 1%                      |
| Optometry                            | 1             | 1%                      |
| Orthopedics                          | 17            | 20%                     |
| Physical Medicine and Rehabilitation | 1             | 1%                      |
| Podiatry                             | 3             | 3%                      |
| Primary Care*                        | 9             | 11%                     |
| Psychiatry                           | 4             | 5%                      |
| Psychology                           | 3             | 3%                      |
| Surgery                              | 6             | 7%                      |
| Urology                              | 1             | 1%                      |

\*includes Family Practice, General Practice and Internal Medicine

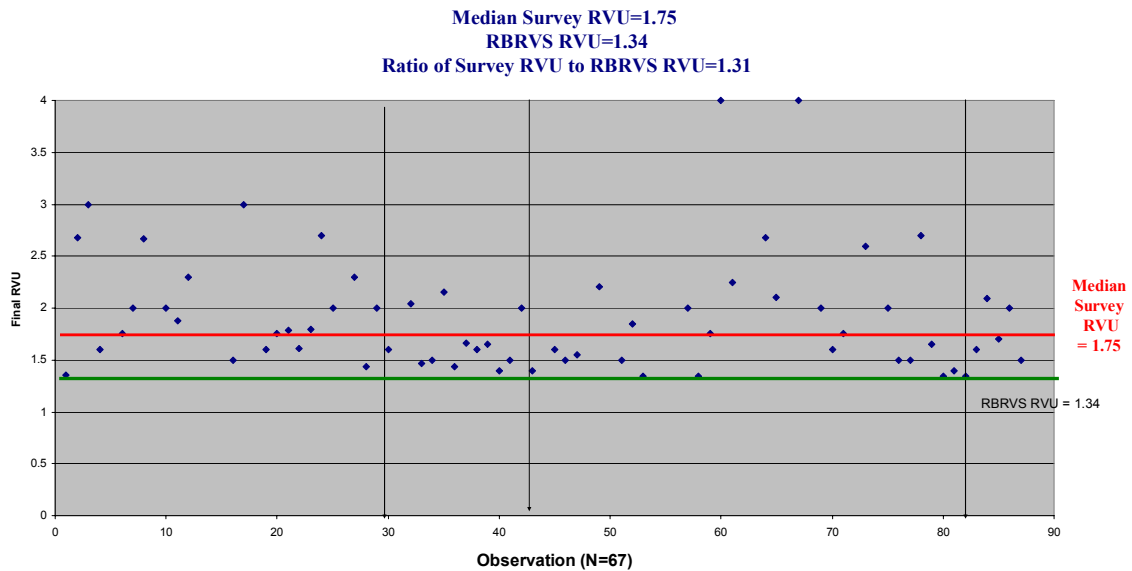
## Survey Results

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- ◆ The next 5 slides show individual work RVU estimates from survey respondents
- ◆ The top 5 most utilized E/M codes are presented
- ◆ Survey results from the in-person sessions vs. mail respondents did not show any significant difference

# Individual Respondent Results: CPT Code 99203

Outpatient Visit, New Patient (problems of moderate severity)



**The LEWIN GROUP**  
Southern CA  
In-Person Session

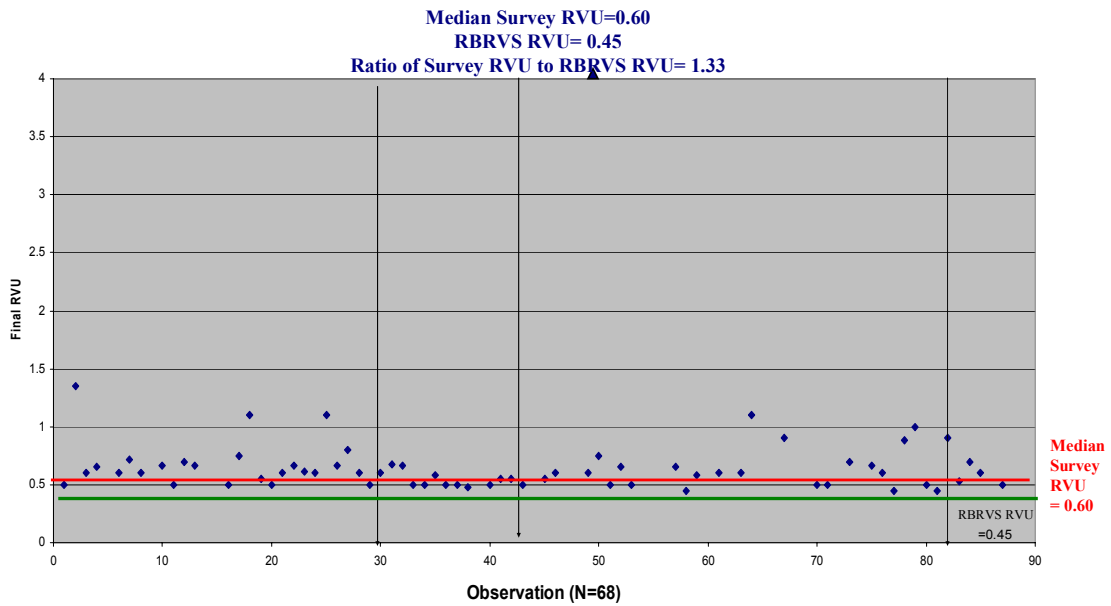
Northern CA  
In-Person Session

Mail Survey

Final  
In-Person Session

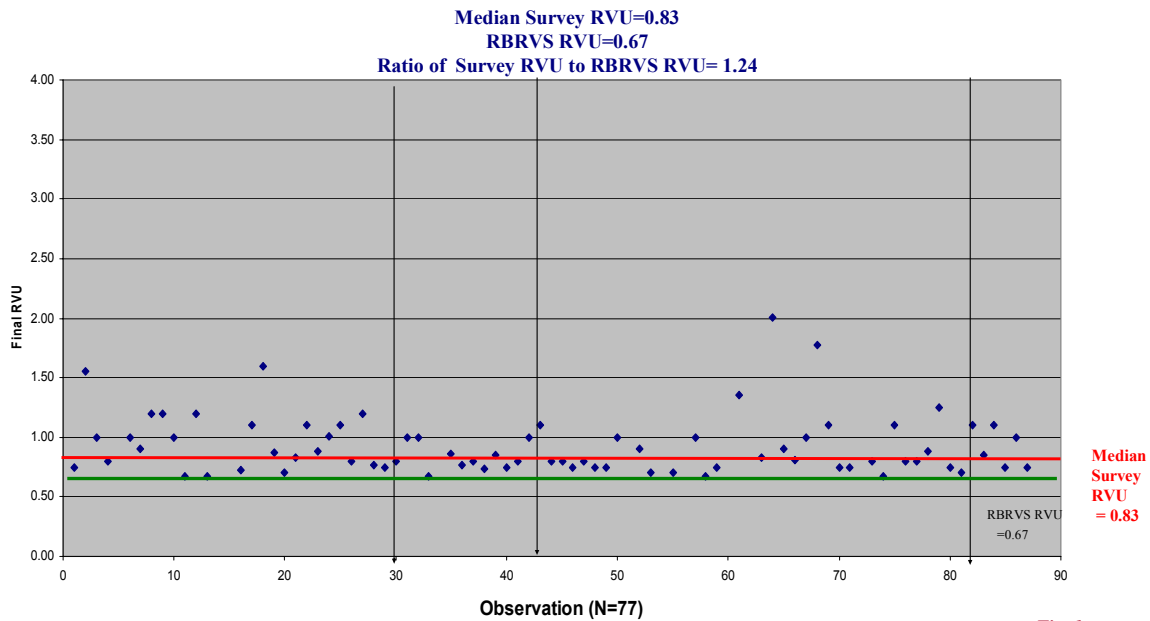
# Individual Respondent Results: CPT Code 99212

Outpatient Visit, Established Patient (problems are self-limited)



# Individual Respondent Results: CPT Code 99213

Outpatient Visit, Established Patient (problems of low to moderate severity)



*Southern CA  
In-Person Session*

*Northern CA  
In-Person Session*

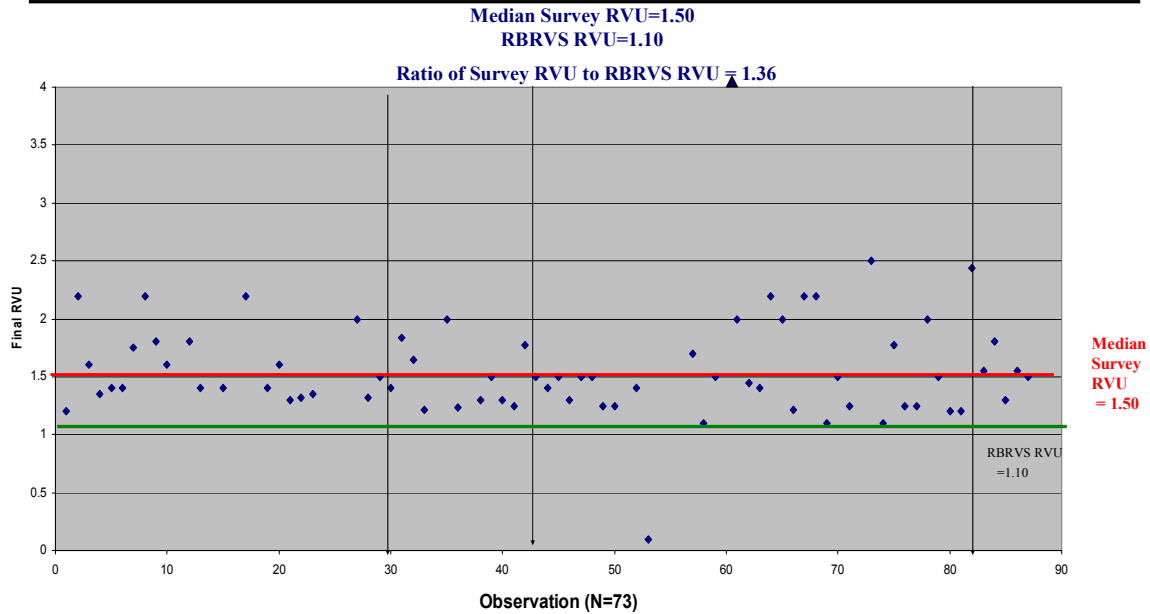
*Mail Survey*

*Final  
In-Person Session*



# Individual Respondent Results: CPT Code 99214

Outpatient Visit, Established Patient (problems of moderate to high severity)



**The LEWIN GROUP**  
Southern CA  
In-Person Session

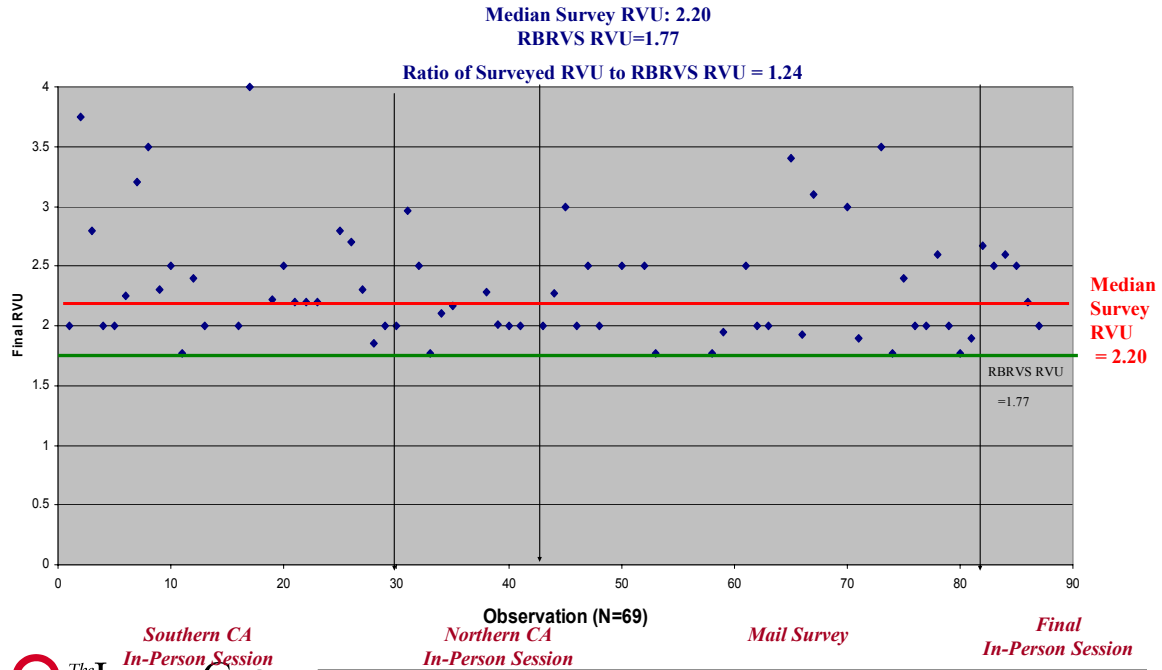
Northern CA  
In-Person Session

Mail Survey

Final  
In-Person Session

# Individual Respondent Results: CPT Code 99215

Outpatient Visit, Established Patient (problems of moderate to high severity)



## Survey Results – for the five most utilized codes

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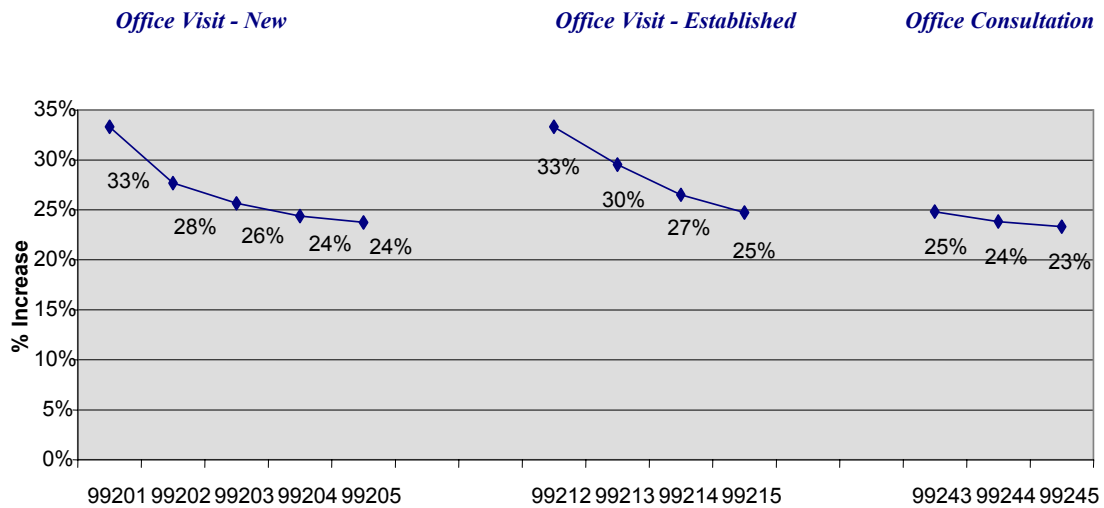
*Survey results were highly comparable across these five codes*

**Overall Mean Ratio of Surveyed RVUs to RBRVS RVUs for the 20 surveyed E/M codes: 1.28**

**Ratio of Surveyed RVU to RBRVS RVU by Code:**

- ♦ 99203—1.31
- ♦ 99212—1.33
- ♦ 99213—1.24
- ♦ 99214—1.36
- ♦ 99215—1.24

## Percent Increase in Final Work Values Relative to RBRVS RVUs (Selected Codes)



## Survey Results – for all participant groups

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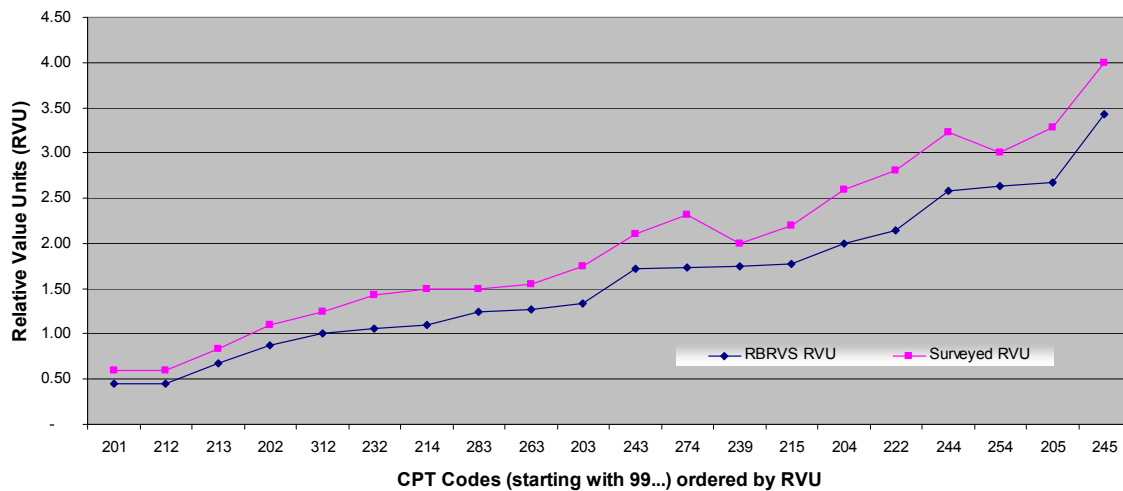
*Survey results were highly comparable across all participant groups*

**Overall Mean Ratio of Surveyed Work Values to RBRVS Work Values for the 20 surveyed E/M codes: 1.28**

**Ratio of different participant groups:**

- Los Angeles: 1.32
- San Francisco: 1.23
- Mail: 1.27
- Final Sessions: 1.24

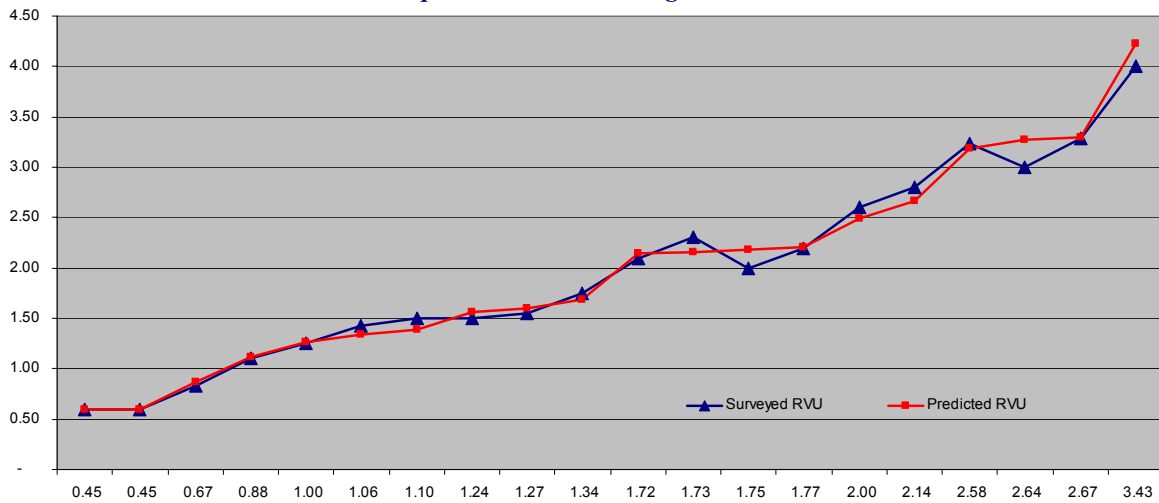
## Survey Results Compared to RBRVS RVUs for the 20 surveyed codes



*RVUs for all 20 E/M codes surveyed were valued higher when compared to RBRVS work RVUs.*

## Predicted vs. Surveyed RVUs

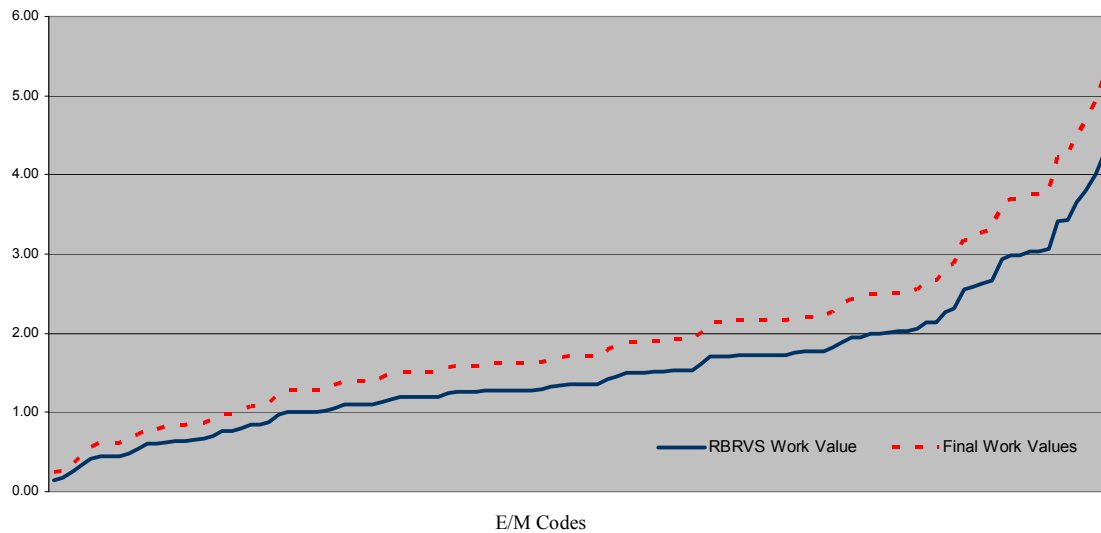
*Values below are presented in increasing order based on RBRVS values.*



|      |       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 99201 | 212 | 213 | 202 | 312 | 232 | 214 | 283 | 263 | 203 | 243 | 274 | 239 | 215 | 204 | 222 | 244 | 254 | 205 | 245 |
| N    | 44    | 68  | 77  | 52  | 9   | 20  | 73  | 16  | 15  | 67  | 50  | 27  | 18  | 69  | 75  | 17  | 63  | 21  | 66  | 55  |

## Final vs. RBRVS Work RVUs for 114 E/M Codes

*Values below are presented in increasing order based on RBRVS values.*



## Percent Increase in Final Work Values Relative to RBRVS Work Values for All 114 E/M Codes

*Values below are presented in increasing order based on RBRVS values.*



- *The % increase in physician work values relative to the RBRVS values tend to decline with increasing complexity of E/M service.*

## Discussion

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The estimated increase in the physician work RVUs reflects additional work when treating workers' compensation patients, including:

- More involved review of records
- More detailed history
- Disability management
- Determination of causation
- Return to work issues and associated paperwork
- Phone calls with employers and insurance carriers
- Additional psychological stress issues
- "Hand-holding" and educating patients
- Non-reimbursable reports (e.g., doctor's first report of injury)

## Impact of Survey Results

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|   |   |    |             |
|---|---|----|-------------|
|   |   |    |             |
| A | Payment for all E/M Codes using Final Study Work RVU Values | \$ | 57,333,609  |
| B | Baseline E/M payment*                                       | \$ | 50,316,739  |
| C | Increase in E/M payment                                     | \$ | 7,016,870   |
| D | Total Payment (all codes)*                                  | \$ | 215,577,690 |
| E | % Increase from Baseline [(Column A - Column B) / Column D] |    | 3.25%       |

\*Lewin Group RBRVS Study, October 2001

## Summary

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- ◆ Physician Work Study Activities:
  - Conducted physician work survey
  - Evaluated 20 high-frequency E/M codes
  - Extrapolated work values for non-surveyed E/M codes
  - Each E/M code has its own unique California workers' compensation work value (see Appendix A)
  
- ◆ Next steps:
  - Incorporate E/M work values into global period for surgical codes
  - Evaluate practice expenses when providing services to workers' compensation patients
  - Conduct an impact analysis by service section of the OMFS and by medical specialty group thus setting the stage for public policy deliberations

# Appendix H

## Revised E&M Physician Work Relative Value Units

**The Relative Work Content of Evaluation and Management Codes: The Physician Work Study**

**Appendix A -Revised Physician Work Relative Value Units for All E/M Codes**

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>  | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|---|---------------------------------|--|--|
|                    | OFFICE VISIT - NEW  |                                 |  |  |
| 99201 <sup>a</sup> | Office/outpatient visit, new, presenting problems are self-limited/minor.   | 44                              | 0.60                                   | 1.33   |
| 99202 <sup>a</sup> | Office/outpatient visit, new, presenting problems of low to moderate severity.                                    | 52                              | 1.12                                   | 1.27   |
| 99203 <sup>a</sup> | Office/outpatient visit, new, presenting problems of moderate severity.   | 67                              | 1.68                                   | 1.25   |
| 99204 <sup>a</sup> | Office/outpatient visit, new, presenting problems of moderate to high severity.                                   | 75                              | 2.49                                   | 1.25   |
| 99205 <sup>a</sup> | Office/outpatient visit, new, presenting problems of moderate to high severity.                                   | 66                              | 3.30                                   | 1.24   |
|                    | OFFICE VISIT - ESTABLISHED  |                                 |  |  |
| 99211              | Office/outpatient visit, established, may not require presence of a physician. Presenting problem(s) are minimal. |                                 | 0.26                                   | 1.53   |
| 99212 <sup>a</sup> | Office/outpatient visit, established, presenting problems are self-limited/minor.                                 | 68                              | 0.60                                   | 1.33   |
| 99213 <sup>a</sup> | Office/outpatient visit, established, presenting problems of low to moderate severity.                            |                                 |  |  |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|--|---------------------------------|--|--|
| 99214 <sup>a</sup> | <b>Office/outpatient visit, established</b> , presenting problems are of moderate to high severity.                    | 73                              | 1.39                                   | 1.26   |
| 99215 <sup>a</sup> | <b>Office/outpatient visit, established</b> , presenting problems are of moderate to high severity.                    | 69                              | 2.21                                   | 1.25   |
|                    | OBSERVATION CARE DISCHARGE DAY MANAGEMENT  |                                 |  |  |
| 99217              | <b>Observation care discharge day management.</b> Service provided to a patient on discharge from observation status.  |                                 | 1.61                                   | 1.26   |
|                    | INITIAL OBSERVATION CARE PER DAY   |                                 |  |  |
| 99218              | <b>Initial observation care per day</b> , problem requiring admission to "observation status" is of low severity.      |                                 | 1.61                                   | 1.26   |
| 99219              | <b>Initial observation care per day</b> , problem requiring admission to "observation status" is of moderate severity. |                                 | 2.66                                   | 1.24   |
| 99220              | <b>Initial observation care per day</b> , problem requiring admission to "observation status" is of high severity.     |                                 | 3.69                                   | 1.23   |
|                    | INITIAL HOSPITAL CARE PER DAY  |                                 |  |  |
| 99221              | <b>Initial hospital care per day</b> , problem(s) requiring admission is of low severity.                              |                                 | 1.61                                   | 1.26   |
| 99222 <sup>a</sup> | <b>Initial hospital care per day</b> , problem(s) requiring admission is of moderate severity.                         | 17                              | 2.66                                   | 1.24   |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|--|---------------------------------|--|--|
| 99223              | <b>Initial hospital care per day</b> , problem(s) requiring admission is of high severity.   |                                 | 3.69                                   | 1.23   |
|                    | SUBSEQUENT HOSPITAL CARE PER DAY   |                                 |  |  |
| 99231              | <b>Subsequent hospital care per day</b> , patient is stable/recovering.  |                                 | 0.83                                   | 1.30   |
| 99232 <sup>a</sup> | <b>Subsequent hospital care per day</b> , patient is responding inadequately to therapy or has a minor complication.   | 20                              | 1.34                                   | 1.26   |
| 99233              | <b>Subsequent hospital care per day</b> , patient is unstable or has a significant complication or has a significant new problem.  |                                 | 1.89                                   | 1.25   |
|                    | OBSERVATION OR INPATIENT HOSPITAL CARE   |                                 |  |  |
| 99234              | <b>Observation or inpatient hospital care</b> including admission and discharge on the same date. Presenting problem(s) requiring admission is of low severity.                        |                                 | 3.17                                   | 1.24   |
| 99235              | <b>Observation or inpatient hospital care</b> including admission and discharge on the same date. Presenting problem(s) requiring admission is of moderate severity.                   |                                 | 4.22                                   | 1.23   |
| 99236              | <b>Observation or inpatient hospital care</b> including admission and discharge on the same date. Presenting problem(s) requiring admission is of high severity.                       |                                 | 5.25                                   | 1.23   |
|                    | HOSPITAL DISCHARGE DAY   |                                 |  |  |
| 99238              | <b>Hospital discharge day</b> , < 30 min spent for final hospital discharge of a patient. Includes final examination, discussion, instructions, preparation of records, prescriptions. |                                 | 1.61                                   | 1.26   |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|--|---------------------------------|--|--|
| 99239 <sup>a</sup> | <b>Hospital discharge day</b> , > 30 min spent for final hospital discharge of a patient. Includes final examination, discussion, instructions, preparation of records, prescriptions. | 18                              | 2.18                                   | 1.25   |
|                    | OFFICE CONSULTATION  |                                 |  |  |
| 99241              | <b>Office consultation</b> , new or established patient, presenting problem(s) self limited or minor.  |                                 | 0.83                                   | 1.30   |
| 99242              | <b>Office consultation</b> , new or established patient, presenting problem(s) of low severity.  |                                 | 1.62                                   | 1.26   |
| 99243 <sup>a</sup> | <b>Office consultation</b> , new or established patient, presenting problem(s) of moderate severity.   | 50                              | 2.15                                   | 1.25   |
| 99244 <sup>a</sup> | <b>Office consultation</b> , new or established patient, presenting problem(s) of moderate to high severity.   | 63                              | 3.19                                   | 1.24   |
| 99245 <sup>a</sup> | <b>Office consultation</b> , new or established patient, presenting problem(s) of moderate to high severity.   | 55                              | 4.23                                   | 1.23   |
|                    | INPATIENT CONSULT - INITIAL  |                                 |  |  |
| 99251              | <b>Initial inpatient consult</b> , new or established patient, presenting problem(s) is self limited/minor.  |                                 | 0.86                                   | 1.30   |
| 99252              | <b>Initial inpatient consult</b> , new or established patient, presenting problem(s) of low severity.  |                                 | 1.66                                   | 1.26   |
| 99253              | <b>Initial inpatient consult</b> , new or established patient, presenting problem(s) of moderate severity.   |                                 | 2.27                                   | 1.25   |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>  | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|---|---------------------------------|--|--|
| 99254 <sup>a</sup> | <b>Initial inpatient consult</b> , new or established patient, presenting problem(s) of moderate to high severity.                  | 21                              | 3.27                                   | 1.24   |
| 99255              | <b>Initial inpatient consult</b> , new or established patient, presenting problem(s) of moderate to high severity.                  |                                 | 4.50                                   | 1.23   |
|                    | <b>INPATIENT CONSULT - FOLLOW-UP</b>  |                                 |  |  |
| 99261              | <b>Follow-up inpatient consult</b> , established patient, stable/recovering.  |                                 | 0.56                                   | 1.33   |
| 99262              | <b>Follow-up inpatient consult</b> , established patient, responding inadequately to therapy or developed a minor complication.     |                                 | 1.09                                   | 1.28   |
|                    |   |                                 |  |  |
| 99263 <sup>a</sup> | <b>Follow-up inpatient consult</b> , established patient, unstable or developed a severe complication or a significant new problem. | 15                              | 1.60                                   | 1.26   |
|                    | <b>CONFIRMATORY CONSULTATION</b>  |                                 |  |  |
| 99271              | <b>Confirmatory consultation</b> , new or established patient, problem(s) is self limited/minor.                                    |                                 | 0.60                                   | 1.33   |
| 99272              | <b>Confirmatory consultation</b> , new or established patient, problem(s) of low severity.  |                                 | 1.08                                   | 1.29   |
| 99273              | <b>Confirmatory consultation</b> , new or established patient, problem(s) of moderate severity.                                     |                                 | 1.50                                   | 1.26   |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|--|---------------------------------|--|--|
| 99274 <sup>a</sup> | <b>Confirmatory consultation</b> , new or established patient; problem(s) of moderate to high severity.  | 27                              | 2.16                                   | 1.25   |
| 99275              | <b>Confirmatory consultation</b> , new or established patient; problem(s) of high severity.  |                                 | 2.87                                   | 1.24   |
|                    | EMERGENCY DEPARTMENT VISIT   |                                 |  |  |
| 99281              | <b>Emergency department visit</b> , presenting problem(s) is self limited/minor.   |                                 | 0.45                                   | 1.36   |
| 99282              | <b>Emergency department visit</b> , presenting problem(s) of low to moderate severity.   |                                 | 0.72                                   | 1.31   |
| 99283 <sup>a</sup> | <b>Emergency department visit</b> , presenting problem(s) of moderate severity.  | 16                              | 1.56                                   | 1.26   |
| 99284              | <b>Emergency department visit</b> , presenting problem(s) of high severity and requires urgent evaluation but does not pose an immediate significant threat to life or physiologic function. |                                 | 2.43                                   | 1.25   |
| 99285              | <b>Emergency department visit</b> , presenting problem(s) of high severity and requires urgent evaluation and poses an immediate significant threat to life or physiologic function.         |                                 | 3.78                                   | 1.24   |
|                    | CRITICAL CARE EVALUATION AND MANAGEMENT  |                                 |  |  |
| 99291              | <b>Critical care evaluation and management</b> of the critically ill or injured patient.   |                                 | 4.92                                   | 1.23   |

| <b>CPT Codes</b>   | <b>Descriptor (Source CPT Manual 2001)</b>  | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|--------------------|---|---------------------------------|--|--|
| 99292              | <b>Critical care evaluation and management</b> of the critically ill or injured patient.  |                                 | 2.49                                   | 1.25   |
|                    | NURSING FACILITY CARE - NEW OR ESTABLISHED  |                                 |  |  |
| 99301              | <b>Nursing facility care</b> , new or established patient, stable/recovering or improving.  |                                 | 1.51                                   | 1.26   |
| 99302              | <b>Nursing facility care</b> , new or established patient, with a significant complication or problem.<br>Creation of a new medical plan of care is required. |                                 | 2.01                                   | 1.25   |
| 99303              | <b>Nursing facility care</b> , new or established patient, with a significant complication or problem.<br>Creation of a new medical plan of care is required. |                                 | 2.50                                   | 1.24   |
|                    | NURSING FACILITY CARE PER DAY - SUBSEQUENT  |                                 |  |  |
| 99311              | <b>Nursing facility care per day, subsequent</b> , new or established, patient is stable/recovering.  |                                 | 0.78                                   | 1.30   |
| 99312 <sup>a</sup> | <b>Nursing facility care per day, subsequent</b> , new or established, patient is responding inadequately to therapy or has developed a minor complication.   | 9                               | 1.27                                   | 1.27   |
| 99313              | <b>Nursing facility care per day, subsequent</b> , new or established, patient has developed a significant complication or problem.                           |                                 | 1.78                                   | 1.25   |
|                    | DOMICILIARY OR REST HOME VISIT - NEW PATIENT  |                                 |  |  |

| <b>CPT Codes</b> | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /lb</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|------------------|--|---------------------------------|---|--|
| 99321            | <b>Domiciliary or rest home visit, new patient, presenting problem of low severity.</b>  |                                 | 0.92                                    | 1.30   |
| 99322            | <b>Domiciliary or rest home visit, new patient, presenting problem of moderate severity.</b>   |                                 | 1.28                                    | 1.27   |
| 99323            | <b>Domiciliary or rest home visit, new patient, presenting problem of high complexity.</b>   |                                 | 1.61                                    | 1.26   |
|                  | <b>DOMICILIARY OR REST HOME VISIT - ESTABLISHED</b>  |                                 |   |  |
| 99331            | <b>Domiciliary or rest home visit, established patient, stable/recovering.</b>   |                                 | 0.78                                    | 1.30   |
| 99332            | <b>Domiciliary or rest home visit, established patient, responding inadequately to therapy or developed a minor complication.</b>              |                                 | 1.03                                    | 1.29   |
| 99333            | <b>Domiciliary or rest home visit, established patient, unstable or has developed a significant complication or a significant new problem.</b> |                                 | 1.27                                    | 1.27   |
|                  | <b>HOME VISIT - NEW PATIENT</b>  |                                 |   |  |
| 99341            | <b>Home visit, new patient, straightforward, problem of low severity.</b>  |                                 | 1.28                                    | 1.27   |
| 99342            | <b>Home visit, new patient, problem of moderate severity.</b>  |                                 | 1.90                                    | 1.25   |

| <b>CPT Codes</b> | <b>Descriptor (Source CPT Manual 2001)</b>  | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|------------------|---|---------------------------------|--|--|
| 99343            | <b>Home visit, new patient</b> , problem of moderate to high severity.  |                                 | 2.82                                   | 1.24   |
| 99344            | <b>Home visit, new patient</b> , problem of high severity.  |                                 | 3.74                                   | 1.23   |
| 99345            | <b>Home visit, new patient</b> , problem of high severity. Patient is unstable or has developed a significant new problem requiring immediate physician attention.                                    |                                 | 4.67                                   | 1.23   |
|                  | HOME VISIT - ESTABLISHED  |                                 |  |  |
| 99351            | <b>Home visit, established patient</b> , problem(s) is of low to moderate severity.   |                                 | 0.98                                   | 0.78   |
| 99352            | <b>Home visit, established patient</b> , problem(s) is of moderate to high severity.  |                                 | 1.59                                   | 0.79   |
| 99353            | <b>Home visit, established patient</b> , problem(s) is of moderate to high severity. Patient may be unstable or may have developed a significant new problem requiring immediate physician attention. |                                 | 2.51                                   | 0.83   |
|                  | PROLONGED PHYSICIAN SERVICE   |                                 |  |  |
| 99354            | <b>Prolonged physician service</b> , office or outpatient setting requiring direct contact beyond the usual service. 1st hour.  |                                 | 2.21                                   | 1.25   |
| 99355            | <b>Prolonged physician service</b> , office or outpatient setting requiring direct contact beyond the usual service. Each additional 30 minutes.  |                                 | 2.21                                   | 1.25   |

| <b>CPT Codes</b> | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|------------------|--|---------------------------------|--|--|
| 99356            | <b>Prolonged physician service</b> , inpatient setting requiring direct contact beyond the usual service.<br>First hour.         |                                 | 2.13                                   | 1.25   |
| 99357            | <b>Prolonged physician service</b> , inpatient setting requiring direct contact beyond the usual service.<br>Each addtl. 30 min. |                                 | 2.13                                   | 1.25   |
|                  | PREVENTIVE MEDICINE - INITIAL  |                                 |  |  |
| 99385            | <b>Initial preventive medicine</b> evaluation and management including a comprehensive history                                   |                                 | 1.92                                   | 1.25   |
|                  | examination, counseling/anticipatory guidance/risk factor reduction interventions; new, age 18-39 yrs.                           |                                 |  |  |
| 99386            | <b>Initial preventive medicine</b> evaluation and management including a comprehensive history                                   |                                 | 2.34                                   | 1.24   |
|                  | examination, counseling/anticipatory guidance/risk factor reduction interventions; new, age 40-64 yrs.                           |                                 |  |  |
| 99387            | <b>Initial preventive medicine</b> evaluation and management including a comprehensive history                                   |                                 | 2.56                                   | 1.24   |
|                  | examination, counseling/anticipatory guidance/risk factor reduction interventions; new, age >65 yrs.                             |                                 |  |  |
|                  | PREVENTIVE MEDICINE - PERIODIC REEVALUATION AND MANAGEMENT   |                                 |  |  |
| 99395            | <b>Periodic preventive medicine</b> reevaluation and management including a comprehensive history exam,                          |                                 | 1.71                                   | 1.26   |

| CPT Codes | Descriptor (Source CPT Manual 2001)   | Survey Item Response (N) | Surveyed Physician Work RVUs /b | Ratio of Surveyed Physician Work RVU / RBRVS RVUs |
|-----------|---|--------------------------|---------------------------------|---|
|           | counseling/anticipatory guidance/risk factor reduction interventions; estab. patient, age 18-39 yrs.          |                          |                                 |   |
| 99396     | <b>Periodic preventive medicine</b> reevaluation and management including a comprehensive history             |                          | 1.92                            | 1.25  |
|           | examination, counseling/anticipatory guidance/risk factor reduction interventions;                            |                          |                                 |   |
|           | established patient, age 40-64 yrs.   |                          |                                 |   |
| 99397     | <b>Periodic preventive medicine</b> reevaluation and management including a comprehensive history             |                          | 2.13                            | 1.25  |
|           | examination, counseling/anticipatory guidance/risk factor reduction interventions;                            |                          |                                 |   |
|           | established patient, age >65 yrs.   |                          |                                 |   |
|           | PREVENTIVE MEDICINE COUNSELING - INDIVIDUAL   |                          |                                 |   |
| 99401     | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to an individual. |                          | 0.64                            | 1.33  |
| 99402     | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to an individual. |                          | 1.25                            | 1.28  |
| 99403     | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to an individual. |                          | 1.83                            | 1.25  |

| <b>CPT Codes</b> | <b>Descriptor (Source CPT Manual 2001)</b>   | <b>Survey Item Response (N)</b> | <b>Surveyed Physician Work RVUs /b</b> | <b>Ratio of Surveyed Physician Work RVU / RBRVS RVUs</b> |
|------------------|--|---------------------------------|--|--|
| 99404            | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to an individual.                  |                                 | 2.43                                   | 1.25   |
|                  | PREVENTIVE MEDICINE COUNSELING - GROUP   |                                 |  |  |
| 99411            | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to individuals in a group setting. |                                 | 0.23                                   | 1.53   |
| 99412            | <b>Preventive medicine counseling</b> and/or risk factor reduction intervention(s) provided to individuals in a group setting. |                                 | 0.36                                   | 1.44   |

<sup>/a</sup> E/M codes surveyed in the Physician Work Survey.

<sup>/b</sup> Physician Work RVUs for E/M codes that were not surveyed were predicted based on a median regression analysis.

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